DOCUMENT RESUME

ED 159 144	95	SP 012 975

AUTHOR	Neiner, Glenn Allen
TITLE	Analysis of Planned Change Within Comprehensive Senior High Schools That Individualize Instruction.
INSTITUTION	Wisconsin Univ., Madison. Research and Development Center for Individualized Schooling.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
REPORT NO	TR456
PUB DATE	Jun 78
CONTRACT	OB-NIE-G-78-0117
NOTE	263p.; Figure 3 is unreadable due to typeovers
EDRS PRICE	MF-$0.83 HC-$14.05 Plus Postage.
DESCRIPTORS	Administrator Role; Change Agents; *Change Strategies; Curriculum Development; *Educational Change; *Educational Innovation; *Individualized Instruction; *Secondary Education
IDENTIFIERS	*Individually Guided Education

ABSTRACT

This research study focused on the change process that was used to bring about individualized schooling in six comprehensive senior high schools. The first chapter contains an overview of the study including a statement of the problem, background of the study, and a review of related literature. In the second chapter the six schools are comprehensively described. These descriptions outline the city and district background, school population, physical facilities, individualized program history, curriculum, teacher student advisement program, administrative and organizational arrangements, and support agencies. Presentation and analysis of data obtained from each school comprises the third chapter. The final chapter presents a summary of the study, findings, conclusions, and implications for further study. (JD)

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Technical Report No. 456

ANALYSIS OF PLANNED CHANGE WITHIN COMPREHENSIVE SENIOR HIGH SCHOOLS THAT INDIVIDUALIZE INSTRUCTION

by Glenn A. Neiner

June 1978

Wisconsin Research
and Development Center
for Individualized Schooling

SP 012 975

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Technical Report No. 456

ANALYSIS OF PLANNED CHANGE WITHIN COMPREHENSIVE SENIOR HIGH SCHOOLS THAT INDIVIDUALIZE INSTRUCTION

by

Glenn Allen Neiner

Report from the Project on
Studies of Administration and Organization for Instruction

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Faculty Associate

Wisconsin Research and Development
Center for Individualized Schooling
The University of Wisconsin
Madison, Wisconsin

June 1978

This Technical Report is a doctoral dissertation reporting research supported by the Wisconsin Research and Development Center for Individualized Schooling. Since it has been approved by a University Examining Committee, it has not been reviewed by the Center. It is published by the Center as a record of some of the Center's activities and as a service to the student. The bound original is in the University of Wisconsin Memorial Library.

Published by the Wisconsin Research and Development Center for Individualized Schooling, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred.

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MISSION STATEMENT

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- conducting and synthesizing research to clarify the processes of school-age children's learning and development
- conducting and synthesizing research to clarify effective approaches to teaching students basic skills and concepts
- developing and demonstrating improved instructional strategies, processes, and materials for students, teachers, and school administrators
- providing assistance to educators which helps transfer the outcomes of research and development to improved practice in local schools and teacher education institutions

The Wisconsin Research and Development Center is supported with funds from the National Institute of Education and the University of Wisconsin.

WISCONSIN RESEARCH AND DEVELOPMENT
CENTER FOR INDIVIDUALIZED SCHOOLING

ACKNOWLEDGMENTS

The final curtain will not drop
Until my breath has gasped its last.
The memory of these past two years
Within my fibers deeply etched.

The litany of my thanks begins
With special mention of my friends.
'Twas Jack who planned a meeting with
My mentor Jim who deftly gave
His expertise and guiding light
Providing friendship, strength, support,
Throughout my journey from the start.

A warm welcome Colin did give
Along with guidance, friendship shared.
The "Liphamites" were deftly forged
Into a strong cohesive group.
There's Colin, Sandy, Tom, and Mick,
With John and Noel--a special pair
Whose lives with mine were intertwined
So as to form the trinity
Encompassing its mysteries.

To all who shared my life within
This time frame short my thanks extends.
For Lois' help and gentle care,
Renee, Hillel, Eric, Judy and John,
All those within the Center who
Have touched me with their lives so rich.

Mother receives my love expressed.
Linda and Joe my thanks and love.
My friends provided faith and trust,
Especially Ann, Nora, Dolly and Hank.

My gratitude for funds received
From N. I. E. and the C. Bs.
Who sponsored my research and growth
Within the R & D Center's mission.

Figure 3

FIRM:
Address:
Phone:
Person Contacted:

I. Would someone in your firm be willing to help teachers and counselors gain better understanding of your firm and its role in the economy? Yes _____ No _____

II. Does your firm have any materials which describe your firm's organization, jobs, etc., which you would be willing to provide for use in school classrooms and libraries?
Yes _____ No _____

III. Job Descriptions or Requirements of Jobs listed.

A.

Entry level jobs	Jobs	Education Necessary
1. Unskilled		
2. Semi-Skilled		
3. Skilled		

B. Part time jobs during high school
Yes _____ No _____ Ages _____ When _____

C. Possibility of jobs for co-op students

Yes _____ No _____

D. Does your firm offer apprenticeships _____, on-the-job training _____, scholarships _____.

IV. Would you or another representative of your firm be willing to discuss economic issues, careers, etc., with students in a classroom setting?

K-3 Yes _____ No _____
4-6 Yes _____ No _____
7-8 Yes _____ No _____
9-12 Yes _____ No _____

V. Would your firm be willing to provide student group observation tours? Yes _____ No _____

Source: Oregon Consolidated Schools. Something New is Coming Out--Oregon Career Education Community Resource Guide. Oregon, Wisconsin, n.d.

Committee members asked and probed;
Then read the script--it did unfold.
Much thanks to Jim, Dinny, and Dick;
As well to Don and Dale
For giving input, trust, and care.

Six schools became a part of me
Starting with their warm welcoming
Creative, sharing, friendly folk
Provided me a desk to stand.
My thanks to them for all they shared.

[illegible] and those
Deserves my thanks for following through
On all details that need be done
To bring the script to completion.

So much unspoken yet remains
Within my being growth untold,
But time will deepen what's begun
In friendship, love, and loyalty
As life reveals more mysteries.

The final word will ne'er be written
But now unfolds the current script
For all to read and ponder through
In search for "truth" which need be tried
In attempting to individualize.

employers assist in the development of specific occupational skills or such skills required for entry as interviewing, test-taking, and application procedures; and (c) employment, in which employers provide paid job opportunities to students.

The Oregon Consolidated Schools (Oregon, Wisconsin) have developed a brief resource assessment tool (Figure 3) which makes information about various firms available to instructors and placement personnel. Representative businesses in the nearby area (including Madison, Wisconsin) were visted. Information was gathered by a member of a special committee during either a personal interview or telephone call. Completed information sheets were then duplicated, organized by the 15 USOE clusters, and filed in three-ring binder notebooks distributed to school personnel. Additional information regarding "Career Observation Trips" (field trips) was also collected and included in the resource notebook (Figure 4).

A completed employer survey is useful for future contacts. It provides specific information about the employer which can be useful in formulating future requests for involvement. For example, the school may want to involve employers as guest speakers or in mock interviews for preparing students in job-seeking skills. The employer surveys can be reviewed to identify those who hire the most employees or use interviews as screening procedures. When making contact with employers to request involvement in these activities, this background information can be used to encourage participation. Employers are approached not just because of their status as employers, but rather from the point of view of what they can uniquely contribute. The sincerity of the request can be demonstrated by asking for suggestions from the employers as to appropriate activities and by maintaining flexibility in arranging for participation. The employer is treated as a partner in the placement effort.

Although contact with employers is often difficult, increased contact between students and employers is essential in a labor market in which hiring is frequently an informal process and dependent on social contacts. Increasing employer involvement by tapping their knowledge is one way to accomplish greater contact. To do this, students should first be asked to identify occupations in which they are interested. The placement staff should then review any information collected about the various businesses and industries through any employer surveys implemented. The placement staff should then personally contact the employers selected as being appropriate to expressed interests of the students and present to them a variety of alternatives for participation including field trips, student interviews, or a classroom presentation. Flexibility should also be offered to scheduling their involvement as some employers experience peak seasons or days of the week when participation would be more difficult. The fewer constraints placed on the employer's involvement, the greater the likelihood that s/he will participate.

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Abstract

ANALYSIS OF PLANNED CHANGE WITHIN COMPREHENSIVE SENIOR HIGH SCHOOLS THAT INDIVIDUALIZE INSTRUCTION

Glenn Allen Neiner

Under the Supervision of Professor James M. Lipham

The purpose of this study was to identify and describe key factors operative in the change process that had been perceived as successfully facilitating individualized schooling in comprehensive senior high schools. The theoretical foundations included IGE principles and systems, social systems, decision, change, and leadership theories.

This study consisted of an intensive, in-depth analysis of semistructured, open-ended interviews coupled with other field methodology techniques of observation and documentary analysis. Data were collected in six selected comprehensive senior high schools, diverse in size, location, socioeconomic level, and ethnic composition. Data were analyzed by school and across schools according to the basic research questions.

The major findings were:

1. Creative and supportive educational leadership behavior and continuity in leadership positions on the part of

administrators in the school and the district were essential to effecting educational change.

2. Strong commitment to the educational philosophy of individualized schooling, coupled with a combination of decentralized management decision making and centralized curricular development greatly supported the changeover to an individualized instructional program.
3. Educational leaders capitalized on local historical circumstances, such as school consolidations, to bring about a total change process.
4. Planning for effective change included identifying the objectives of the change, an assessment of the present system, a specification of the resources needed, an organizational model to implement the change, a process of curricular development, a staff development program, a realistic time frame which specified short- and long-range goals, an identification of appropriate strategies to be used, and an evaluation process for the different objectives.
5. Some additional resources were needed over the initial period of the change process for intensive staff and curricular development activities.
6. The following components were necessary to implement change: a shared decision-making structure, creation

of a personable environment, an advising system for students, and curricular development for individualized instruction.

7. A continuing inservice program was needed for incoming teachers to help them acquire the skills necessary to function effectively as advisors and as teachers in an individualized program.
8. Large, open space areas were acoustically inadequate and required different teaching strategies.
9. The schools failed initially to define adequately student behavioral expectations and to provide structures necessary for staff and students to fulfill new role expectations.
10. Giving students credit on the basis of objectives accomplished, and not on the amount of time spent in a course, was an integral component of individualized continuous progress instruction.

Based on the findings, several implications for practice and for future research were delineated.

APPROVED: ______________________

DATE: May 16, 1978

CHAPTER I

INTRODUCTION TO THE STUDY

During the past few years secondary education has come under critical scrutiny by several national and international committees all of which have highlighted the need for drastic changes in the school system, the learning programs, and the supportive environment. Four committees which studied the secondary schools identified some of their problems and stated recommendations for change in the following reports: the Faure Report (1972), the Brown Report (1973), the Coleman Report (1974), and the Martin Report (1974). Although the picture painted by these reports was indeed gloomy, there were indications that some schools were involved in radical change within the system and were attempting to individualize instruction for the students who were in the process of moving from childhood to adulthood.

The RISE Report (Newcomer, 1975) presented a comprehensive list of recommendations stemming from the Commission's belief that effective education is personalized education. The Report (p. 35) stressed:

> It is vital that the education community not only recognize the inevitability of change but also be a leader in the process of change. Change is bound to occur, but without the involvement of the education community, the task of reforming education can never be fully accomplished.

Secondary schools reflect the forces of change in society. The unparalleled and tumultuous changes that have taken place in American society and in the character of American youth are presenting public education today with a new and bewildering set of challenges. Although secondary schools have responded in diverse ways to the changing times, current reports indicate that the fragmented efforts to improve public education have not been adequate to keep pace with the changes in our society and in our youth.

Much is said about what needs to be done to accomplish a more personalized education for secondary youth. A paucity of material exists currently which indicates how such objectives are to be met. What change process can schools adopt which will help them realize the objectives of individualized schooling? Weinstock (1973, p. 67), in reporting on a symposium of leading educators dealing with the future of secondary schools, stated:

> The subject of how to make changes in the schools--how to get them started, make them work, and make them stick--became a theme that would not, could not, be confined to the specific sessions. All talk, whatever the scheduled subject, was laced through with talk of ways to effect change.

Responding to the need to look more closely at the change process, this investigator undertook this study as one of the three companion investigations by Daresh (1978) and Watkins (1978) which consisted of an analysis of six comprehensive senior high schools involved in individualized schooling. A field study approach using a semi-structured, open-ended interview technique was used to describe and to identify key components within the change process.

This chapter includes the background of the study, the statement of the problem, the theoretical foundations of the study, the significance of the research, and a brief overview of the study.

Background of the Study

Prior to 1977, the Wisconsin Research and Development Center for Individualized Schooling had maintained a programmatic emphasis on the process of individualized schooling in elementary schools. As a result of this emphasis, Individually Guided Education (IGE) was introduced as an alternative form of education and was adopted by hundreds of elementary schools throughout the United States. Chase (1977, p. xi) stated "IGE stands out as one of the more widely adopted and better implemented of the educational innovations which took shape in the sixties."

In the winter of 1977, the Research and Development Center initiated an extension of IGE to secondary schools. Klausmeier (1977) introduced a set of enabling objectives which were to be used as a framework for the development of a model for individualized secondary schooling. These enabling objectives were introduced in the form of an instrument administered to secondary school personnel who gathered for the First Annual IGE Secondary Conference sponsored by the Center in the spring of 1977.

Participants at the conference representing middle, junior, and senior high schools from across the United States were asked to examine the enabling IGE Secondary objectives and to indicate the extent to which they were: (1) desirable and (2) feasible with regard to possible implementation in their own schools. Discussions with the conference participants concerning the process objectives indicated that any subsequent studies of secondary institutions would need to take cognizance of the different orientations that exist at the middle, junior, and senior high school levels.

Following the conference, two studies (Klausmeier, T., 1978; Maier, 1978) were conducted as part of the work of the Administration and Organization for Instruction unit in the Research and Development Center. Thomas Klausmeier investigated the perceived desirability and feasibility of implementing the IGE/Secondary objectives in six junior high and middle schools while Maier studied five senior high schools. Preliminary analyses of Maier's data indicated that, while the perceived desirability of implementing the objectives was high, the perceived feasibility was low. Respondents in Maier's study saw complex issues in senior high schools which they felt would inhibit the operation of individualized schooling. Clearly, it was necessary for the Research and

Development Center to explore alternative modes of administering and organizing instruction in senior high schools if individualized programs were to achieve success at that level.

The current work of the Administration and Organization for Instruction component is focused on the exploration of alternative administrative and organizational patterns which facilitate the individualization of secondary schooling. As a result of these and other studies to follow, it is anticipated that alternative models will be generated and will be offered to senior high schools which are seeking to change their administrative and organizational structures to promote individualized schooling.

Statement of the Problem

The purpose of this study was to identify and describe key factors which were operative in the change process which had been perceived as successfully facilitating individualized schooling within identified comprehensive senior high schools. The study consisted of an intensive, in-depth analysis of data obtained through semi-structured, open-ended interviews coupled with other field methodology techniques of observation and document analysis to identify and describe the key factors in the change process.

The researcher focused on the process of change and not any specific change or innovation that might have resulted from the change process. In looking only at the results of change, the decision-making process involved and the nature of implementation problems become obscured (Gross et al., 1971).

The following basic research questions were explored in this study:

1. How was the change process to bring about your individualized schooling initiated?
2. Who were the key persons responsible for creating and implementing the change process?
3. What were the planned strategies that were used to bring about the existing organizational arrangements and educational practices which facilitate individualized schooling in your school?
4. What were the major identifiable supports and constraints which affected the implementation of the strategies initially planned?
5. What strategies, if any, would be done differently or added in order to produce the desired results, and why?

The researcher used the theoretical constructs described in the following section to guide the research but freedom was allowed to observe the unanticipated elements. Although the constructs that follow provided a general framework, flexibility was allowed to ignore constructs that did not emerge or to use additional constructs to explain unanticipated phenomena.

Review of the Literature

The conceptual and theoretical foundations of this study included IGE principles, systems theory, social systems theory, decision theory, change theory, and leadership theory. The IGE principles provided a philosophical basis for individualized schooling as well as a set of enabling objectives used to identify the selected schools. Systems theory provided a framework through which to view the school. Social systems theory provided the holistic perspective to deal with the interplay between the individual and organizational dimensions in the change process. Decision theory addressed the decision-making process which was an integral component of the change process. Change theory furnished an analytical framework with which to explore the change process. Leadership theory provided a way of describing leadership behavior. These theories with relevant research findings and their appropriate constructs which are applicable to this research study are explained in this section.

IGE Principles

Individually Guided Education (IGE) began as an alternative to age-graded, self-contained schooling at the elementary and middle school levels. Klausmeier (1977, p. 7) stated, "IGE aims to provide quality education that yields high student achievement, develops the abilities underlying those achievements, and contributes to healthy personality developments."

At the elementary level IGE developed as a system of seven interrelated components. These components included: the multiunit organizational-administrative arrangement, instructional programming for the individual student, evaluation for educational decision-making, curricular materials compatible with IGE, home-school-community relations, facilitative environments for IGE, and the continuing research and development required to improve IGE. IGE was "conceptualized as a comprehensive alternative form of schooling designed to produce higher educational achievements through providing well for differences among students in rate of learning, learning style, and other characteristics" (Lipham and Fruth, 1976, p.2). Klausmeier (1977, pp. 1-6) stated that IGE represents a change of great magnitude and it requires many changes that are possible only if there is early inservice education followed by continuing staff development within each IGE school.

Howes (1974) concluded from her research on IGE elementary schools that the following general variables were of importance in understanding change in relation to IGE: (1) the perceived relative advantage, observability, and simplicity of the change; (2) the degree to which the individual was informed of, involved in, and supported in the change process; (3) the way and degree to which individuals communicated with each other; and (4) the way and degree to which the organization was complex and less formalized.

Goodridge (1975) found that in adopting IGE the principal was the major decision maker. The results also revealed that a relationship existed between the extent of teacher involvement in the decision to adopt IGE, the effectiveness of the implementation of the innovation, and teacher satisfaction with the innovation over time.

Paul (1974) found that there was a positive relationship in the linkage between teacher education institutions and schools in the diffusion of the multiunit school concept. He found that the dissemination of IGE was effective through organizations with knowledge of IGE and having the capability of assisting schools in the changeover process. The ability to provide training sessions and direct contact with personnel also aided successful implementation efforts.

The success of the IGE system at the elementary and middle school level has been demonstrated in many districts. As the time span has increased since its inception, direction is now being sought to the continuation of the basic concepts at the secondary level. The Research and Development Center has begun to focus some of its research effort on IGE/Secondary. Due to the nationwide acceptance of IGE/E as a system of components, and in order to provide as much continuity as possible between the levels of schooling within a district, an effort has been made to describe IGE/S in terms of interrelated components (Klausmeier, 1977). In April, 1977, participants who attended the workshop on educational reform and renewal through IGE/S held at Madison, Wisconsin responded to an instrument designed to obtain their judgments regarding the desirability of enabling objectives to achieve the major comprehensive objectives of IGE/S. They regarded the total set of components and enabling objectives as a desirable form of individualized schooling (Klausmeier, 1977). The outcome of the workshop resulted in IGE/S consisting of the following nine interrelated components: (1) administration of the school, (2) organization of instruction for shared decision making, (3) instructional programming for the individual student, (4) compatible curricular material, (5) evaluation for instructional decision making, (6) home-school-community relations, (7) community learning experiences, (8) supportive facilitative environments, and (9) continuing research and development. These components are shown in Figure 1.1.

Systems Theory

Hall and Fagan (1956, p. 18) defined a system as "a set of objects together with relationships between the objects and between

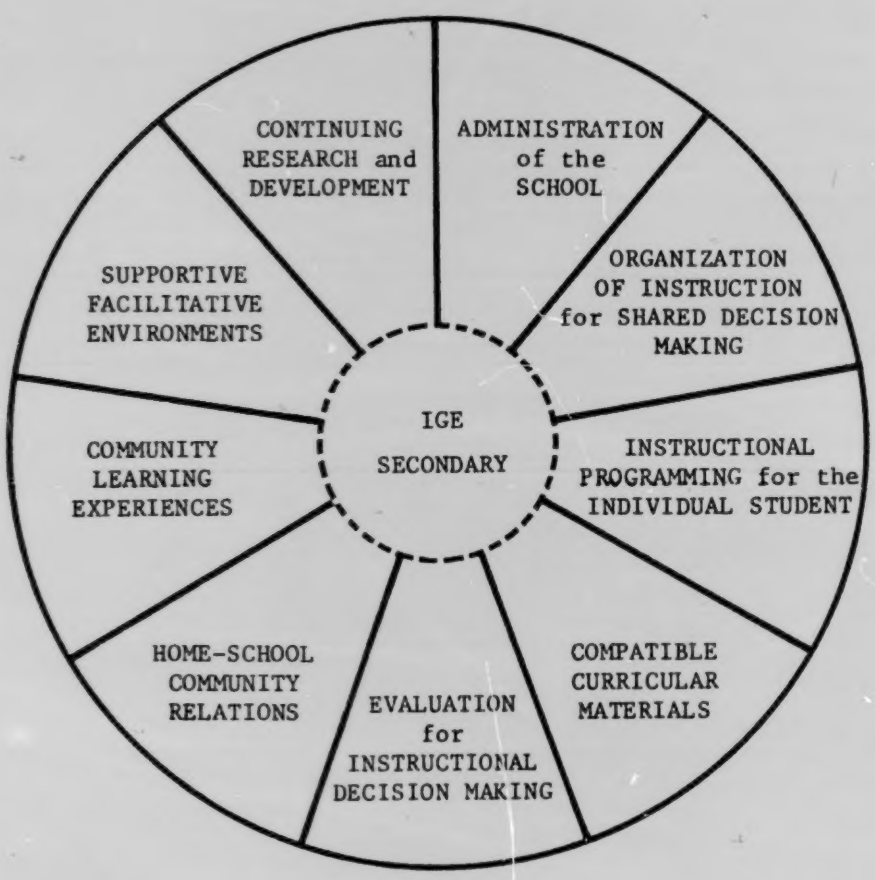
IGE SECONDARY
CONTINUING RESEARCH and DEVELOPMENT
ADMINISTRATION of the SCHOOL
ORGANIZATION OF INSTRUCTION for SHARED DECISION MAKING
INSTRUCTIONAL PROGRAMMING for the INDIVIDUAL STUDENT
COMPATIBLE CURRICULAR MATERIALS
EVALUATION for INSTRUCTIONAL DECISION MAKING
HOME-SCHOOL COMMUNITY RELATIONS
COMMUNITY LEARNING EXPERIENCES
SUPPORTIVE FACILITATIVE ENVIRONMENTS

Figure 1.1. Major Components of Secondary Individually Guided Education.

Source: Klausmeier, H. J. Principals' ratings of the desirability of the comprehensive and enabling objectives for individually guided education/secondary. Working Paper No. 207. Madison: Wisconsin Research and Development Center for Cognitive Learning, 1977.

their attributes." The school will be considered as an open system possessing the qualities of such a system; i.e., progressive segregation, progressive mechanization, equifinality, and feedback processes.

The process of change was viewed in this study within the systems perspective. The systems perspective has been described by Immegart (1969) in terms of the following characteristics:

1. Is a cross-disciplinary or interdisciplinary mode of thought.
2. Involves contextual, holistic thought that focuses on both wholes and relevant parts within an environmental context.
3. Includes the conscious process of reflection.
4. Is concerned with linkages and patterns in time-space.
5. Analyzes structures through empirical referents, real proximity and juxtaposition, relevant parameters, and pertinent interfaces, not in abstract or superimposed terms.
6. Is ultimately operational, providing a realistic departure for manipulating variables in a complex context (Lipham and Hoeh, 1974, p. 30).

Kaufman (1970, pp. 162-163) has used two major categories in his system design. They are: system analysis and system synthesis. System analysis includes the following steps: (1) identifying the problem, and (2) determining solution requirements and alternatives. System synthesis involves three remaining steps: (3) choosing a solution strategy from alternatives, (4) implementing the solution strategy, and (5) determining performance effectiveness. How each school dealt with each of these steps within the change process was a matter of consideration in the study.

Social Systems Theory

A social system, which fits within systems theory, is described as consisting of two dimensions: (1) the normative or nomothetic, composed of the institution, its roles and expectations, and (2) the personal or idiographic, composed of the individuals each having certain personalities and need-dispositions (Lipham and Hoeh, 1974, pp. 49-53). Getzels, Lipham, & Campbell (1968) using Parsons' (1951) basic concept of social systems theory developed a general model of the major dimensions of behavior in a social system which is shown in Figure 1.2. This model involves the sociological, the psychological, the biological, and the cultural dimensions of the system interacting within its environment.

In dealing with the complexity of change, another dimension which is obtained from the sociological analysis of the normative dimension and a psychological analysis of the personal dimension is the transactional dimension which is important to consider. The transactional "is a blend of the other two dimensions and is

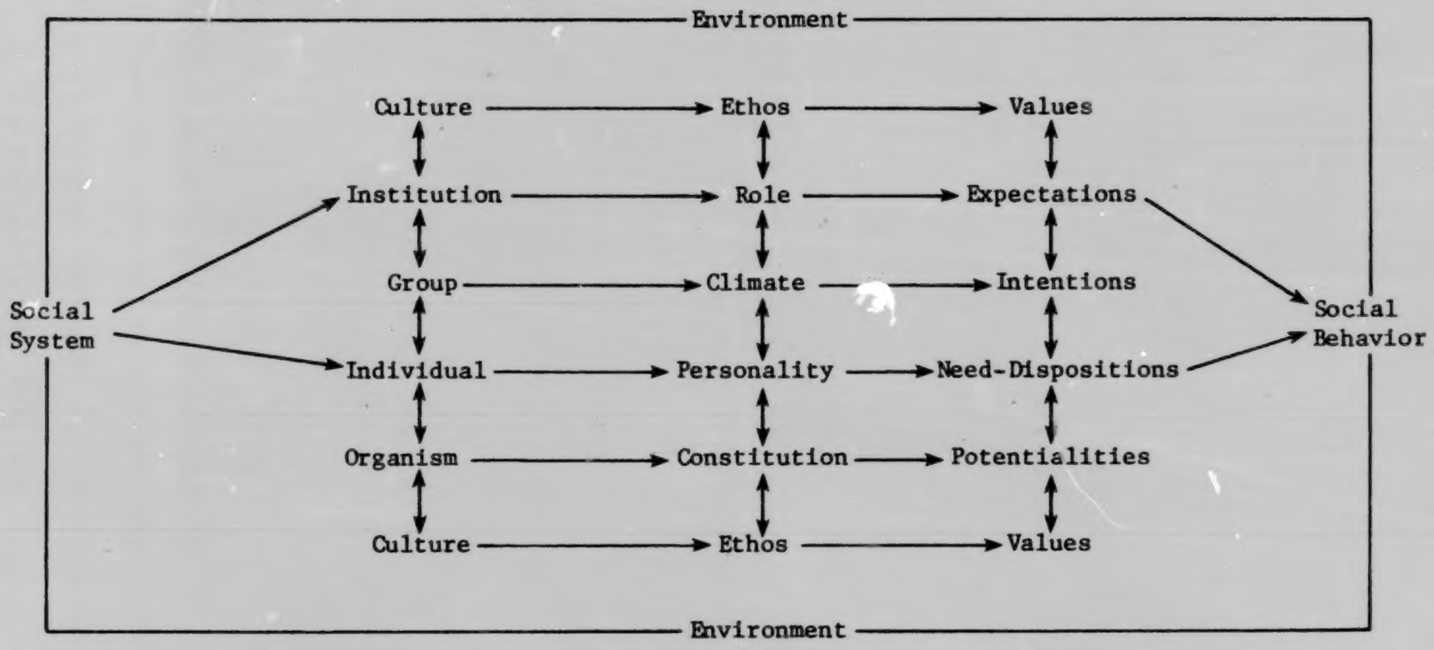
Environment
Culture
Ethos
Values
Institution
Role
Expectations
Group
Climate
Intentions
Social System
Individual
Personality
Need-Dispositions
Social Behavior
Organism
Constitution
Potentialities
Culture
Ethos
Values
Environment

Figure 1.2. General Model of the Major Dimensions of Behavior in a Social System Including the Transactional Dimension.

Sources: Getzels, J. W., Lipham, J. M., & Campbell, R. F. Educational administration as a social process. New York: Harper and Row, 1968, p. 105.

Sweitzer, R. An assessment of two theoretical frameworks. In F. D. Carver and T. J. Sergiovanni (Eds.), Organization and human behavior: Focus on schools. New York: McGraw-Hill Book Company, 1969, p. 17.

composed of the elements of group, climate, and intentions" (Sweitzer, 1969, p. 168). Sweitzer (1969) viewed the transactional dimension as ". . . a deliberate attempt to be thoroughly aware of the limits and resources of both individuals and institution and to apply the two as a particular problem may demand" (p. 172). This dimension is also shown in Figure 1.2.

In dealing with the change process it is not only necessary to view the interplay between the individual and organizational dimensions; but the informal interaction among individuals within the system and between a system and its environment must also be considered (Zaltman, Florio, and Sikorski, 1977).

In this study, the focal social system was the senior high school. The social systems model was utilized to examine the change process which took place within the system.

Decision Theory

No change can occur within a system without decisions being made. Decision theory then is an integral part of the change process. Lipham & Hoeh (1974, p. 155) stated, "Decision making is a process wherein an awareness of a problematic state of a system, influenced by information and values, is reduced to competing alternatives among which a choice is made based on perceived outcome states of the system." A model of the decision-making process that Lipham developed is shown in Figure 1.3. The key concepts included

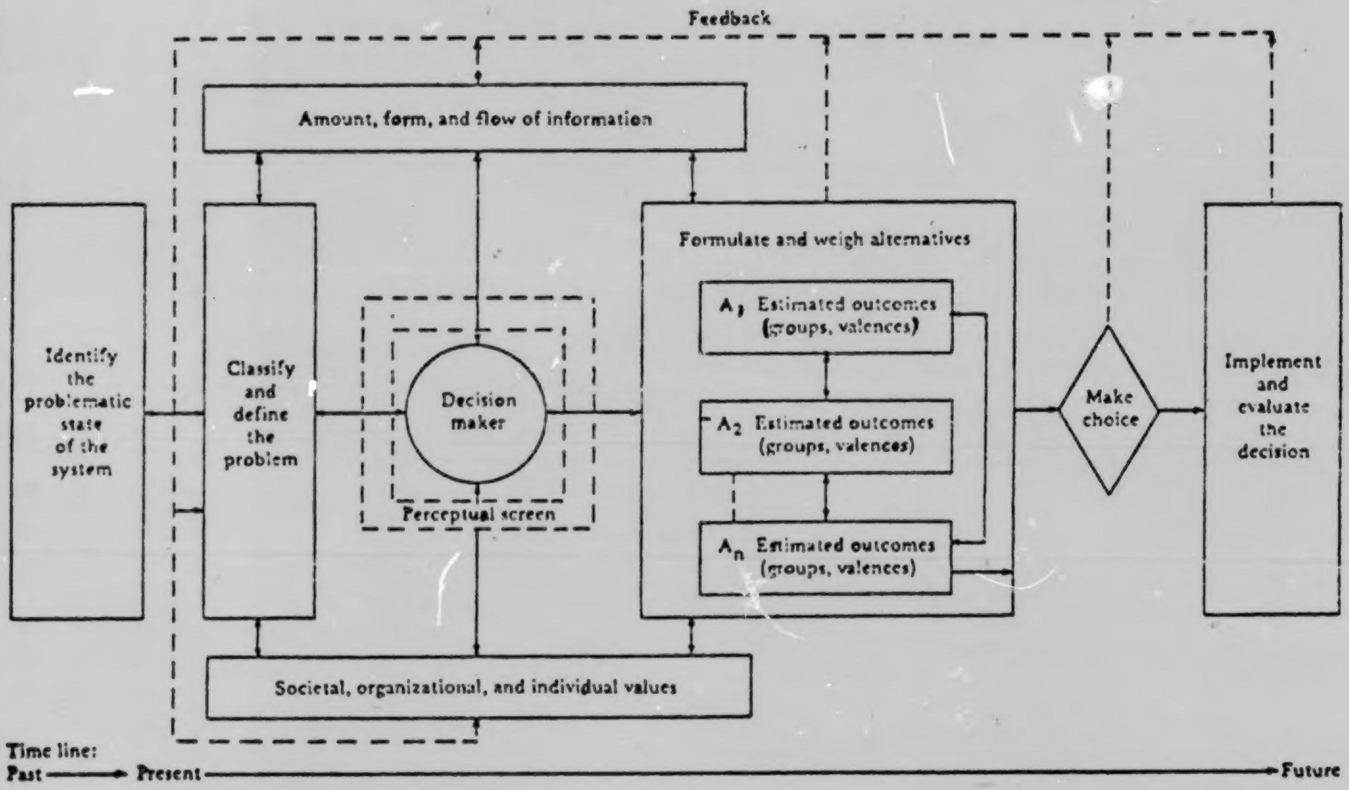
Feedback
Amount, form, and flow of information
Identify the problematic state of the system
Classify and define the problem
Decision maker
Perceptual screen
Formulate and weigh alternatives
A1 Estimated outcomes (groups, valences)
A2 Estimated outcomes (groups, valences)
An Estimated outcomes (groups, valences)
Make choice
Implement and evaluate the decision
Societal, organizational, and individual values
Time line:
Past
Present
Future

Figure 1.3. Model of the Decision-Making Process.

Source: Lipham, J. M. Making effective decisions. In J. A. Culbertson, C. Henson, and R. Morrison (Eds.), Performance objectives for school principals. Berkeley, California: McCutchan, 1974, p. 88.

are: process, problem awareness, information, values, perception, alternatives, choice and estimated outcomes. The six-stage, systems-oriented model of the decision-making process can be summarized as follows:

1. Identifying the problem: defining and establishing priorities for the decision to be made
2. Setting the decision criteria: determining what information and values are relevent to the decision
3. Obtaining information: utilizing appropriate mechanisms to collect, summarize, and deliver the required data at the appropriate time
4. Formulating alternatives: relating the data to the decision criteria
5. Making the decision: choosing an alternative
6. Implementing and evaluating the decision: assessing progress and outcomes (Lipham and Hoeh, 1974)

Besides the decision processes, two other dimensions of decision making are: decision involvement, which can range from no involvement to the actual making of the decision, and decision content, which relates to the functions or tasks under consideration.

A useful typology for the analysis of decision making includes routine decision making, heuristic decision making, and compromise decision making (Lipham and Hoeh, 1974, pp. 163-164). All three kinds of decision making are involved in the change process. The emphasis of the type of decision making used can be related to a particular phase of the change process; i.e., heuristic decision making is of greater importance in the initial stages of the change process.

Simon (1960) described two kinds of decisions--those which are "nonprogrammed" in that they are novel, instructional and consequential, as compared to "programmed" decisions which are repetitive and routine to the extent that a definite procedure has been worked out for handling them. Many decisions involved in the change process would seem to be of the nonprogrammed type and would appear to contain the element of uncertainty by their very nature.

Rogers and Shoemaker (1971) discussed two major classes of innovation decisions in organizations: (1) authority decisions and (2) collective decisions. In discussing authority decision it is useful and often important to distinguish between two types of authority decisions: a) authority decisions with member participation (the participative approach) and b) authority decisions without member participation (the authoritative approach). In the participative approach there is a wider sharing of power although the decision to implement the innovation is ultimately made by the persons in power positions, but it is done in consultation with those affected by the change (Zaltman et al., 1973).

Rogers & Shoemaker (1971) defined the collective decision as one where individuals in a social system adopt or reject by consensus and where all must conform to the system's decision. In collective decision the members of the group might engage in some type of voting or polling whereby it is determined what the outcome will be.

In discussing decision making in small groups, Schein (1969) noted that decisions can be made by majority rule or by consensus. He suggested that consensus is more effective. With consensus there is no formal voting on a decision but rather someone "tests for the 'sense of the meeting,' . . .. If there is a clear alternative which most members subscribe to, and if those who oppose it feel they have had their chance to influence, then a consensus exists" (p. 56). Schein (1970) noted that decisions made by majority rule are often not well implemented, even by the group that made the decision. He concluded that this may be due to continued resentment on the part of the minority group and also to the possibility that the minority group may still hope to reverse the decision at a later date.

Researchers have found that interaction among participants may be beneficial during some phases of problem solving but detrimental in others (Vroom and Grant, 1969, p. 79). The collective decision process is most applicable and productive when participants feel that (1) the innovation situation they are working on is relevant to their lives, (2) they have the competence to initiate and implement the innovation, (3) they have the authority to carry out the innovation (Zaltman et al., 1973, p. 85).

Gross (1971) pointed out:

> Evidence to test the relative effectiveness of strategies of initiation that stress participation in comparison with other methods, for example, imposition from the top, is not available. Most proponents of subordinate participation cite personal experience, logical argument or the findings of only a few empirical studies. (p. 26)

Fahey (1971) stated that his study of shared power in decision making in schools clearly indicated the large gap that exists between the rhetoric of educators vis-a-vis shared power in decision making, and the actual implementation of such practices. Mininberg (1970) concluded that the more a teacher perceives himself to be a participant in decision making, the more likely he will be to perceive himself as involved in innovative activity. Pellegrin (1972) in a study concerned with innovation and decision making noted the following problems which may surface as a direct result of the implementation of decentralized decision making in the change process.

> Decision making by school staffs was impeded by a variety of developments. For one thing, the chronic pressures of school operations, endemic in all schools, gave priority to dealing with immediate problems and short-term decisions, any of which were at best of marginal relevance to differentiated

> staffing. Planning time for considering major decisions of lasting import seemed forever inadequate, despite long workdays and workweeks for school staffs. Moreover, the form that self-government was to take remained a chronic issue. Even when rules and procedures for obtaining consensus were finally devised, the problem of enforcement of decisions remained. Authority to govern does not automatically produce procedures for obtaining compliant behavior from dissenters or even from those approving the decisions. (p. 25)

How decisions are made, who makes them, the content of the decisions, and the implementation of decisions are all intriguing considerations in the study of the change process. Another consideration worth observing is whether the blend of these components varies during different phases of the change process.

Change Theory

The change process is complex and interwoven with many different fibers. There exists no general theory of planned educational change but a diversity of concepts and perspectives have been developed (Miles, 1967). Numerous theories have been offered describing or prescribing processes for change in systems. These theories can provide the change planner with a structure for conceptualizing the change process and provide some necessary background for developing change strategies. A broad overview of four models of change will be presented followed by a discussion of strategies for implementing change.

Problem-Solving Model

The problem-solving model of change perceives the user of an innovation as a client to be helped in a collaborative setting. Outsiders are not usually the initiators of change but serve in a two-way reciprocal manner with the client (Havelock, 1969). Paul (1977) presented the following synopsis of the model:

> The first stage is user diagnosis of problems, perhaps including the help of outside facilitators. Next, the user, in collaboration with the outside facilitator searches for alternative solutions to the problem; a solution is chosen from a list compiled by the user and/or facilitator and is implemented on a trial basis; if it appears promising, it is then incorporated into the user system. (p. 18)

This approach focuses on: (1) the user, (2) needs assessment, and (3) user action to solve the problem. Lewin's (1947) three-step process which was influenced by Barnard's (1938) decision-making model included: (1) unfreezing the client system in order to realize a problem exists and change is needed, (2) moving the client systems in order to implement the change, and (3) freezing the client system in order to firmly establish the change.

Lippitt, Watson, & Westley (1958) favored this theory in their discussion of planned change. As a result of their studies of change agents and client systems they expanded Lewin's three steps to include the following seven phases which they identified in the change process:

> Phase 1: The client system discovers the need for help, sometimes with stimulation by the change agent.
>
> Phase 2: The helping relationship is established and defined.
>
> Phase 3: The change problem is identified and clarified.
>
> Phase 4: Alternative possibilities for change are examined; change goals or intentions are established.
>
> Phase 5: Change efforts in the "reality situation" are attempted.
>
> Phase 6: Change is generalized and stabilized.
>
> Phase 7: The helping relationship ends or a different type of continuing relationship is defined. (p. 123)

Although they did not explicate a separate stage of evaluation, they did stress the need for feedback during the implementation stage, phase 5.

Thelen (1967) extended the model beyond the stabilization of the client system. He proposed that the process of change involved a cyclical pattern where the system was not static but was engaged in a continuous cycle of generating, diagnosing, and solving problems. The change relationship that he advocated was a "collaborative action-inquiry" between practitioner-clients and researcher-change agents. He utilized Lewin's "force field analysis."

Havelock (1969) synthesized the basic properties of the problem-solving approach into the following five points: (1) the user is the starting place, (2) diagnosis precedes the identification of solutions, (3) the outside helping role is nondirective,

(4) the importance of internal resources is recognized, and (5) user-initiated change is the strongest.

The thesis of internal motivation is frequently employed in the literature on change to legitimize participation, that is, the active involvement of individuals who are affected by decisions in the decision-making process. Morrish (1973) commented that the literature on social change has shown that people generally accept innovations more readily if they understand them, regard them as relevant to their particular situation, and also help to plan them. Havelock (1969) pointed out that some studies reveal that teachers' participation in the policy-making process of the school has led to less alienation, a greater sharing of ideas, and greater receptivity to change.

An additional revised view of the problem-solving model to include political power has been suggested by Mann (1976). For example, user adaptation of change programs may be better understood as a partisan struggle among power holders. This concept was documented by Maguire (1970) in a study of a planned change project when he found that the structured steps of the problem-solving model had less impact than did informal interpersonal relationships and political considerations.

Social Interaction Model

The social interaction model is one which is widely used in agriculture and medicine. It underlines the importance of interpersonal networks of information, of opinion leadership, of personal contact and social integration. Since it relies on the informal linking structure of practice organizations and knowledge-production sources it is not a systematic model.

Distinguishing characteristics of the social interaction view of change as summarized by Paul (1977) are the emphasis on: (1) communication channels and messages for diffusing innovations, (2) interpersonal influence patterns leading to adoption of innovations, and (3) stimuli for adoption originating outside of the adopting system.

Rogers (1962) initially identified five stages of the social interaction model but later revised these based on later research that had been done. His revised stages are: (1) knowledge of the innovation, (2) persuasion leading to forming an attitude about the innovation, (3) decision about adopting or rejecting the innovation, and (4) confirmation from peers that the decision was a sound one (Rogers and Shoemaker, 1971, p. 103). In the literature one finds the stages of this model with slightly different labels and sometimes different activities but with the same intent and purposes.

The essential features which Havelock et al., (1969) saw are derived from the social interaction model were:

1. The importance of the social relations network
2. The user's position in that network
3. The significance of the informal personal relationships and contacts
4. The importance of the reference group identification
5. The essential irrelevance of the size of the adopting unit
6. The differential significance of the different types of influence strategies at different stages in the adoption process (p. 7)

An empirical study by LaMar (1966) focused upon the effect of inservice education on the progress of teachers as they moved through Rogers' social interaction stages. He found that the stages were not distinctly perceived by teachers and that there were cross-stage reasons given for rejection of the innovation. Carlson's (1965) study which focused on the adoption of innovations among school systems illustrated the potency of social position and status on the direction of communication flow. It also highlighted the importance of social structure, interpersonal interaction, and the flow of communication.

The innovations with which the social interaction model usually deals tend to be observable, technological, and susceptive to evaluation. Paul (1977) noted that the model's applicability to education has been questioned. For example, (1) educational systems and staff are not comparable to farms and farmers--the focus of the social interaction model during its early development; (2) agricultural innovations are easily evaluated, visible, and reliable in contradistinction to educational innovations; and (3) emphasis is placed on the early phases of change--awareness and adoption--rather than the implementation stage which is believed to be a major stumbling block in education (Baldridge, 1974; Havelock, 1969; McLaughlin, 1976). Nevertheless, the social interaction perspective does offer a different and constructive view of the change process (p. 22).

Research-Development-Diffusion Model

The Research-Development-Diffusion ([illegible]) model can be typified by that developed by Clark & Guba (1967) who were guided by five major assumptions. First, it was assumed that there should be a rational sequence in the development and implementation of an innovation. Second, there should be long-term intensive planning. Third, there should be division and organization of labor to fit the sequential planning. Fourth, the consumer, or client, is assumed to be generally passive but rationally oriented, ready to accept and adopt the innovation. Finally, it is accepted that there will be high initial cost, justified by the anticipated long-term benefits in efficiency and quality, and the suitability of the innovation for mass dissemination.

Paul (1977) presented the following synopsis of the model:

> Basic research is followed by applied research; these findings serve as a framework for the development of a new technique, product, or design for improving educational practice. The development is produced and then disseminated to a wide audience who receive assistance in installing it. (p. 24)

It is significant to note the following comment regarding the Clark & Guba (1967) schema:

> All that is claimed for the categories of the taxonomy is that they are related to, and not necessary for, change in education. No claim is made that this is a sufficient set of categories. No contention is set forth that a relationship between or among the categories represents an explanation of, or causes for, changes which occur in education. The notion that the schema is a theory or can be employed as a theory or strategy is mistaken. (Gross et al., 1971, p. 20)

As it became apparent from research on the use of this model a fourth phase was added to the model. Since many of the diffused changes were not being institutionalized the fourth phase became that of adoption. The four sequential phases are research, development, diffusion, and adoption with evaluation being seen as an integral part of each phase.

The RDDA model tends to underestimate the stages of diffusion and adoption through its assumption that the enlightened self-interest of the practitioner will lead to the eventual incorporation of the innovation. The assumption that the adopter is passive and that most educational change comes from outside the schools elicited the following comment:

> With that perspective, the research and development community may be tempted to huckster particular products, and, in the urgency to sell, they may overlook the need to build problem-solving capacity into the organizations they are serving. Researchers, developers, administrators, and educators have seldom created an innovative environment where alternatives could be considered and options explored. (Baldridge and Deal, 1975, p. 6)

There seems to be a need for educational planners to have a problem orientation rather than a product orientation. Campbell (1972) advocated a policy "shift from the advocacy of a specific reform to the advocacy of the seriousness of the problem, and hence to the advocacy of persistence in alternative reform efforts" (p. 189).

Thomas (1975) denied the usefulness of the RDDA model of Clark & Guba when he stated, "I advocate the abandonment of, rather than the elaboration of, the R & D model" (p. 106). He did not believe that strengthening the communication link between and among agencies in the R & D community would promote higher quality innovations in the schools since few concepts generalized easily from one setting to another. He further pointed out that teachers can and do develop innovations without the assistance from research and development.

Other criticisms of the RDDA model have centered upon (1) the linear nature of the four stages (Carter, 1966; Kreitlow & MacNeil, 1969); (2) the passive nature of the audience (House et al., 1972); and (3) the lack of concern for the nature of the innovation itself (Camaren, 1966; Rogers and Shoemaker, 1971).

Linkage Model

The linkage model incorporates elements from the three previously discussed models to form an interrelated model which links sources of knowledge with the users of knowledge and facilitates the interorganizational communication between the user and the developer. There is no single model of linkage.

Bhola (1965) was an early user of the term linkage in education. More recently, conceptualization and empirical tests of a promising dissemination and utilization linkage model have been completed by Havelock & Lingwood (1973), Lingwood & Morris (1976), and Paul (1975). Paul (1977) indicated that there are five indices which comprise the model:

1. User Problem Solving and Helping

   Focus on helping user groups develop capacity to solve problems and on identifying users to help in dissemination and implementation acitivites

2. Need Sensing

   Focus on developing mechanisms for regularly determining user needs and for transforming needs into problem statements

3. Client-Centered Solution Building

   Focus on doing research which is directly applicable to users and for exploring problems at the time they are critical for users

4. Solution Processing Channels

   Focus on producing summaries of research, rewriting findings into language users understand, identifying important users for specific findings, and selecting appropriate channels to reach users

5. Micro-System Building

   Focus on establishing structures so that users and researchers can work together on doing projects and exchange information

The linkage model is depicted in Figure 1.4. It begins with user problem-solving and helping on the left and moves clockwise with micro-system building in the middle.

The linkage model assumes that practitioners live within a user system comprised of sociocultural norms which are different from the system involved with creating and developing new techniques and practices. Interaction between these two incompatible systems is achieved through a collaborative, reflective, and sensitive linkage relationship.

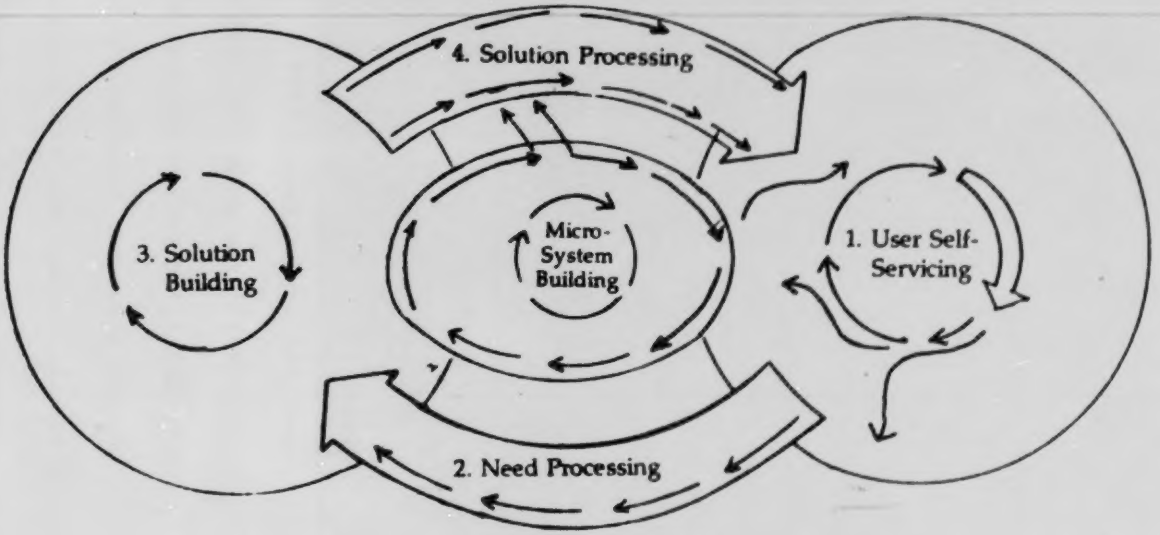
4. Solution Processing
3. Solution Building
Micro-System Building
1. User Self-Servicing
2. Need Processing

Figure 1.4. Dissemination and Utilization Linkage Model.

Source: Havelock, R. G., & Lingwood, D. R & D utilization strategies and functions: An analytical comparison of four systems. Ann Arbor, Michigan: Institute for Social Research, Center for Research on Utilization of Scientific Knowledge, 1969.

Havelock (1971) described the seven stages constituting the linkage approach as (1) linkage which signifies the degree of interpersonal connection and mutual communicative relations among two or more parties, (2) structure which signifies the systematic organization and coordination of elements within the research-utilization continuum, (3) openness which signifies readiness to give and to receive new information, (4) capacity which includes factors related to a broad range of human, fiscal, and political resources, (5) reward which represents positive reinforcement accruing to members of the system involved in the research-utilization continuum, (6) proximity which signifies physical accessibility, and (7) synergy which represents an active redundancy of forces, purposefully orchestrated and directed at the adoption of an innovation (pp. 21-29).

While there exists little empirical and descriptive research for verifying the linkage concept as developed (Lipham and Fruth, 1976) it has focused attention on the major factor of linkage. There is always the question of how to bridge the gap between theory and practice. Chase (1970) related:

> The building of organizational links fo facilitate the flow of knowledge into educational practice is going forward slowly but persistently. Education not only suffers from inadequate knowledge-producing resources, but also from the lack of closely linked agencies for moving knowledge through essential processes and phases to widespread and effective use. (p. 302)

Strategies

In dealing with strategies in a dynamic system there is a lot of unpredictability regarding the outcomes. When one is operating in a people oriented system the continual interaction between the idiographic and nomothetic dimensions requires that there be a continual monitoring of the strategies being utilized. There must be flexibility in order to be able to adapt the strategies to current needs of both the institution and the persons involved.

The models of change that have been discussed describe or perhaps prescribe in a formal way the general process of change. The time must come, however, when the planner or change agent must begin to outline an approach for actually executing change. At this point one's mode becomes strategic. The notion of deliberate and conscious change implies that at some point in the process some means or strategy is selected or created for effecting change. The strategy may be developed along the lines of a particular change model or simply according to the planner's intuition.

Few educators would quibble with the need and usefulness of being able to make an analysis of alternative routes to change, but they do not always want to invest heavily in time and resources to develop and apply change strategies. The result of this is that educational change is typically unsystematic and disruptive.

Baldridge & Deal (1975) put it succinctly, stating that most educational change management is based largely on intuition and "seat of the pants" strategy.

In order for planned change to take place it is necessary for a change planner to determine some strategies which will help to bring the change to fruition. There is no single strategy that can be applied which is effective in dealing with all the interacting and complex elements of the change process. A review of the change literature reveals that there are generally three approaches: power, manipulative, and rational. Figure 1.5 indicates the main roots of ideas and idea systems underlying the principal strategies of changing and their subvariants. This may be useful in seeing both the distinctions and the relationships between various strategies of changing in time perspective.

Miles (1964) considered a strategy, in operational terms, as a set of policies which underly specific tactics or actions that are considered useful in order to bring about the permanent installation of a particular innovation. Zaltman (1977) stated, "a change strategy is an approach taken to mediate appropriate change behavior by relevant actors" (p. 73). This is an appropriate definition when dealing with the change process and was the one applied in this study.

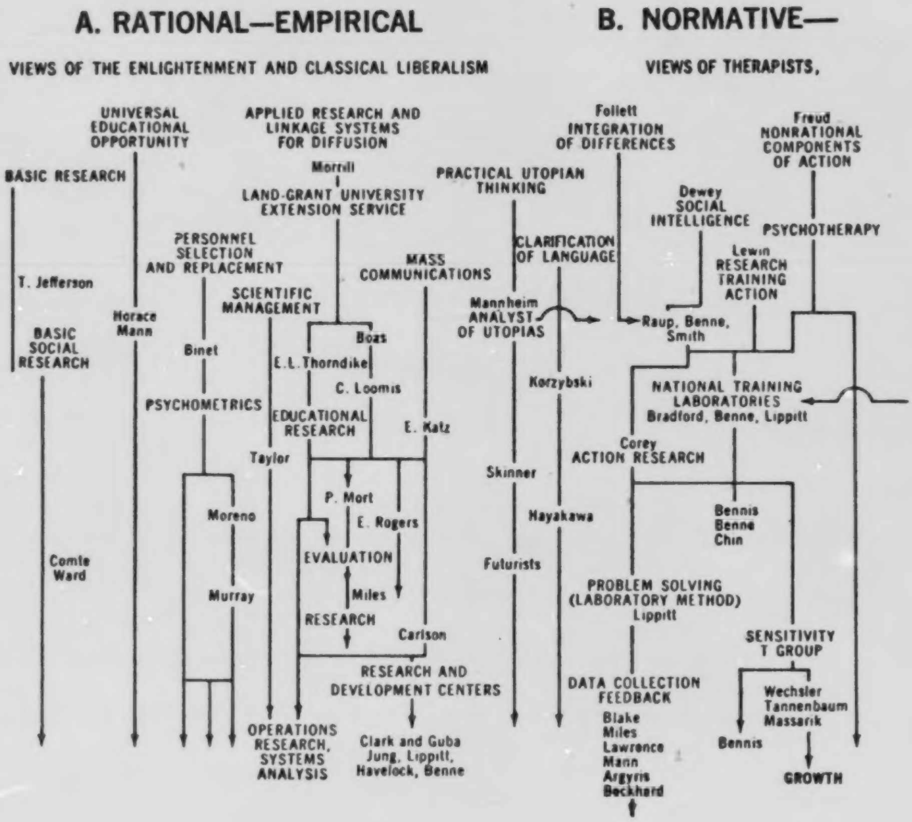
A. RATIONAL—EMPIRICAL
VIEWS OF THE ENLIGHTENMENT AND CLASSICAL LIBERALISM
B. NORMATIVE—
VIEWS OF THERAPISTS,
BASIC RESEARCH
T. Jefferson
BASIC SOCIAL RESEARCH
Comte Ward
UNIVERSAL EDUCATIONAL OPPORTUNITY
Horace Mann
PERSONNEL SELECTION AND REPLACEMENT
Binet
PSYCHOMETRICS
Moreno
Murray
SCIENTIFIC MANAGEMENT
Taylor
OPERATIONS RESEARCH, SYSTEMS ANALYSIS
APPLIED RESEARCH AND LINKAGE SYSTEMS FOR DIFFUSION
Morrill
LAND-GRANT UNIVERSITY EXTENSION SERVICE
Boas
E.L. Thorndike
C. Loomis
EDUCATIONAL RESEARCH
P. Mort
E. Rogers
EVALUATION
Miles
RESEARCH
MASS COMMUNICATIONS
E. Katz
Carlson
RESEARCH AND DEVELOPMENT CENTERS
Clark and Guba
Jung, Lippitt,
Havelock, Benne
PRACTICAL UTOPIAN THINKING
Mannheim ANALYST OF UTOPIAS
Skinner
Futurists
CLARIFICATION OF LANGUAGE
Korzybski
Hayakawa
Follett INTEGRATION OF DIFFERENCES
Dewey SOCIAL INTELLIGENCE
Raup, Benne, Smith
Lewin RESEARCH TRAINING ACTION
Freud NONRATIONAL COMPONENTS OF ACTION
PSYCHOTHERAPY
NATIONAL TRAINING LABORATORIES
Bradford, Benne, Lippitt
Corey ACTION RESEARCH
Bennis Benne Chin
PROBLEM SOLVING (LABORATORY METHOD)
Lippitt
DATA COLLECTION FEEDBACK
Blake
Miles
Lawrence
Mann
Argyris
Beckhard
SENSITIVITY T GROUP
Bennis
Wechsler
Tannenbaum
Massarik
GROWTH

Figure 1.5. Strategies of Deliberate Changing.

Source: Chin, R., & Benne, K. D. General strategies for effecting changes in human systems. In W. G. Bennis, K. D. Benne, R. Chin, & K. E. Cores (Eds.), The planning of change. New York: Holt, Rinehart and Winston, 1976, pp. 44-45.

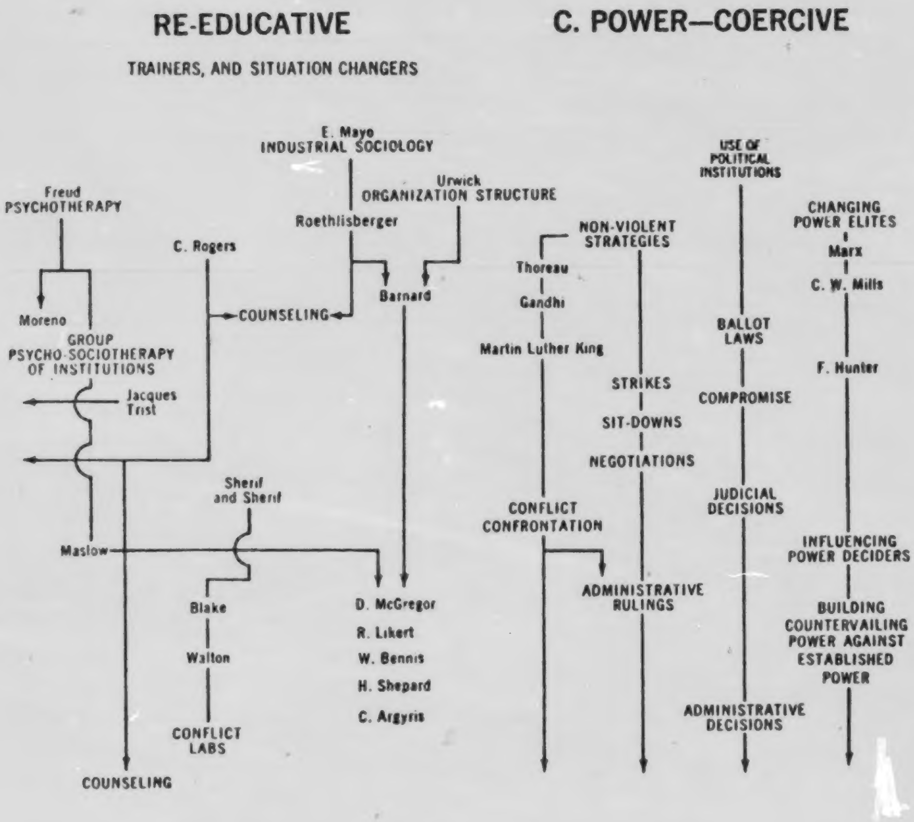
RE-EDUCATIVE
C. POWER—COERCIVE
TRAINERS, AND SITUATION CHANGERS
E. Mayo
INDUSTRIAL SOCIOLOGY
Urwick
ORGANIZATION STRUCTURE
Freud
PSYCHOTHERAPY
Roethlisberger
C. Rogers
Barnard
COUNSELING
Moreno
GROUP
PSYCHO-SOCIOTHERAPY
OF INSTITUTIONS
Jacques
Trist
Sherif
and Sherif
Maslow
Blake
Walton
CONFLICT
LABS
D. McGregor
R. Likert
W. Bennis
H. Shepard
C. Argyris
COUNSELING
NON-VIOLENT
STRATEGIES
Thoreau
Gandhi
Martin Luther King
STRIKES
SIT-DOWNS
NEGOTIATIONS
CONFLICT
CONFRONTATION
ADMINISTRATIVE
RULINGS
USE OF
POLITICAL
INSTITUTIONS
BALLOT
LAWS
COMPROMISE
JUDICIAL
DECISIONS
ADMINISTRATIVE
DECISIONS
CHANGING
POWER ELITES
Marx
C. W. Mills
F. Hunter
INFLUENCING
POWER DECIDERS
BUILDING
COUNTERVAILING
POWER AGAINST
ESTABLISHED
POWER

Figure 1.5 (Continued)

Chin & Benne (1976) categorized three types of groups of strategies for changing. These groups can be described as follows: (1) Empirical-Rational Strategies assume that people are rational and that they will follow their rational self-interest once this is revealed to them. There is also an underlying assumption that reason determines the process of initiating change; (2) Normative-Re-educative Strategies assume that people are motivated by basic needs and that change is centered in a social as opposed to an individual environment. Patterns of action are supported by socio-cultural norms and by commitments to them. Sociocultural norms are supported by the attitude and value systems of individuals which undergird their commitments. Change in practice occurs only as the persons involved are brought to change their normative orientation to old patterns and develop commitments to new ones. (3) Power-Coercive Strategies assume that people will acquiese to the application of power and thereby change. The power can be legitimate power or authority but it could also involve coercive power, legitimate or not. In general, emphasis is on political and economic sanctions in the exercise of power; but other coercive strategies emphasize the utilization of moral power.

Sieber (1972) has taken these three strategies and related them to three images of practitioners that designers of change hold implicitly. These images are: (1) the rational man, (2) the cooperator, and (3) the powerless functionary. Each of these images has its own implications regarding how a person would go about choosing strategies for a change process. These concepts can be related to the four models of change that have previously been discussed. Figure 1.6 depicts the four models of change and the three strategies as well as the concomitant views of practitioners.

Guba (1967) developed several approaches for each of the basic kinds of strategy. He proposed a typology based on the appeals made to the potential changer. His typology consisted of (1) a value strategy which uses the appeal to values as they relate to the substance of the change, (2) a rational strategy which involves presenting evidence and logical argument in favor of change, (3) a didactic strategy which involves the imparting of the skills and knowledge needed to change, (4) a psychological strategy which manipulates the potential changer's needs for acceptance and involvement, (5) an economic strategy which is based on control of resources and compensation, (6) a political strategy which involves influence through conflict and compromise, and (7) an authority strategy which involves influencing subordinates.

Zaltman (1977) pointed out that the usefulness of Guba's typology lays in its suggestiveness with regard to the relevant motivations for educational change; the potential changer may be motivated by the value of the change itself, or by secondary

CHANGE STRATEGIES AND ASSUMPTIONS ABOUT PRACTITIONERS

Models of Change	*Empirical-Rational Strategy* Practitioner viewed as Rational	*Normative-Re-Educative Strategy* Practitioner viewed as Cooperative	*Power-Coercive Strategy* Practitioner viewed as Powerless
Problem-Solving	*Moderate* e.g.: analysis of needs and selection of best solution are rational approaches	*High* e.g.: establishing user groups to identify problems and build solutions is a cooperative approach	*Low* e.g.: enforcing laws, rules, and administrative policies are seen as detrimental to the development of self-sufficient problem-solving
Social Interaction	*High* e.g.: evaluating compatability and relative advantage of innovations are rational approaches	*Moderate* e.g.: being open to the marketing of new products and being willing to be persuaded to use them reflects a cooperative approach	*Moderate* e.g.: being influenced by peers to adopt innovations and being bombarded by advertisements renders the user with little will power to defend against unneeded innovations
Research, Development, Diffusion	*High* e.g.: implementing R&D products based on their superiority to present conditions is a rational approach	*Low* e.g.: being concerned with needs and dispositions of users is viewed as unnecessary and/or inappropriate	*High* e.g.: adoption of textbooks by legislative enactments, passing laws, and expecting top-down flow of change all assume little power on the part of the user to respond or prevent
Linkage	*Moderate* e.g.: instituting collaborative arrangements between R&D community and practitioners is a rational approach	*High* e.g.: establishing collaborative relationships is based on a cooperative view of both the R&D and practice communities since the collaborative effort should be mutually satisfying	*Low* e.g.: enacting laws is seen as counter-productive to the establishment of trust and mutually satisfying and beneficial relations

Figure 1.6. Models of Change in Terms of Change Strategies and Assumptions About Practitioners.

Source: Paul, D. Change process at the elementary, secondary, and post-secondary levels of education. In N. Nash & J. Culbertson (Eds.), Linking Process in Educational Improvement. Columbus, Ohio: University Council for Educational Administration, 1977.

characteristics of the change (e.g., how easy it is to implement); or by the contingency relationship between the change and other rewards or punishments (p. 77).

Zaltman (1972) used four strategy categories: (1) power strategies, which involve the use or threat of force, (2) persuasive strategies, which involve the manipulation of messages, rewards, or symbols to urge acceptance of change, (3) re-educative strategies, which involve the communication of facts about change, and (4) facilitative strategies, which involve increasing the ease with which the change can be implemented.

When working with the implementation of strategies, it is obvious that different types of strategies can be mutually reinforcing rather than exclusive. An example of this would be the use of persuasive tactics to initiate a re-educative strategy that in turn promotes a more supportive climate for change.

Watson (1967) suggested that all strategies should have equal consideration by the change planner. He also listed the following five preconditions for any successful attempt at institutional change:

1. The participants must feel that the project is essentially their own and not wholly devised by outsiders.
2. The project must be wholeheartedly supported by the senior officials of the system.

3. The project must be in reasonably close accord with the values and ideals of the participants.

4. The participants should experience support, trust, acceptance and confidence in their relations with one another.

5. The participants must feel assured that their autonomy and security are not in any way threatened.

To what extent these are all preconditions for change or whether certain strategies might be used to bring about these conditions is a questionable matter.

In the literature other strategy classifications can be found but they emerge as typologies more relevant to the specific tactics chosen to implement broad strategies. (Rosenau, 1974; Warwick and Kelman, 1973; Katz and Kahn, 1966; Benzen and Tye, 1972). Figure 1.7 presents classifications of strategies that have been discussed under the three broad approaches of power, manipulative, and rational. Also included in this figure are examples of tactics listed under these approaches which helps illustrate the relationship of tactics to strategy. One needs to keep in mind that particular tactics might be employed to implement any of the broad strategies. It is quite possible that in studying different strategies we can observe the same tactics being used. The tactics then are the "tools" the strategist has available regardless of the broad approach he decides to use.

	POWER	MANIPULATIVE	RATIONAL
Strategy Type:	(threat/application of rewards and punishments)	(rearranging features of environment)	(communicating the justification for change)
Examples:	Guba's economic, political, and authority strategies	Guba's didactic and psychological strategies	Guba's value and rational strategies
	Chin & Benne's power-coercive	Chin & Benne's normative	Chin & Benne's empirical-rational
	Niaz/Jones's coercive-utilitarian	Niaz/Jones's utilitarian	Niaz/Jones's normative
	Sieber's "powerless participant"	Sieber's "cooperation"	Sieber's "rational man"
	Walton's power	Walton's attitude	
	Zaltman's power	Zaltman's persuasive & facilitative	Zaltman's reeducative
	Kester & Hull's coercive	Kester & Hull's persuasive	Kester & Hull's informative
Examples of Tactics:	Legal sanctions (e.g., court-ordered busing)	Advertising	In-service training
	Withholding funds	Product development	Publicity
	Rewards (e.g., university credit)	Stress induction	Action research
	Hierarchy (e.g., district mandates)	Testimonial	Goal setting

Figure 1.7. A Typology of Change Strategies.

Source: Zaltman G., Florio, D. H., & Sikorski, L. A. Dynamic educational change. New York: The Free Press, 1977, p. 81.

Zaltman (1977) pointed to some general areas that the strategist needs to consider carefully before choosing an appropriate strategy because they have important implications due to the different requirements that are needed for each of the types of approaches. One of these areas is knowledge of the user system. Each strategy requires some knowledge of the system but how much and what kind of knowledge will depend upon the type of strategy that would be used. Another area is the kind of commitment to change that is involved. The basis for commitment has implications for the success of a change strategy. The more closely the commitment to change is based on the change itself, the more self-sustaining will be the resultant change. Other areas, such as motivation for change and appropriate settings for the change, were also considered.

Strategy selection is not an easy task, but a crucial one if there is to be effective change in the system. Strategy selection involves judging which approach or combination of approaches will be best, given the situational opportunities and constraints that exist.

Leadership Theory

In order for the change process to proceed it is necessary that identifiable leaders be integrally involved in the design, institution, and implementation of the strategies to bring about change. Lipham & Hoeh (1974) defined leadership as:

> That behavior of an individual which initiates a new structure in interaction within a social system; it initiates change in the goals, objectives, configurations, procedures, inputs, processes, and ultimately the outputs of social systems (p. 182).

Koontz & O'Donnell (1974) defined the ability to lead "as the art of inducing subordinates to accomplish their assignments with zeal and confidence" (p. 344). They viewed this skill as a compound of two major ingredients: the ability to invent and use appropriate motivators and the ability to inspire.

Three kinds of leadership style were delineated and defined by Getzels & Guba (1957): nomothetic, idiographic, and transactional.

The nomothetic style emphasizes the normative dimension of behavior and accordingly the requirements of the institution, the role, and the expectations. The idiographic style stresses the personal dimension of behavior and accordingly the requirements of the individual, the personality, and the need-dispositions. The transactional style calls attention to the need for moving toward the nomothetic style under one set of circumstances and toward the idiographic style under another set of circumstances (Lipham and Hoeh, 1974, pp. 195-197).

In viewing leadership within a social system one sees the reality of leadership as a complex, multifaceted phenomenon. During the change process different types of leaders might emerge in response to the needs of the institution or to the personal needs of the individual.

Significance of the Study

This study has significance because it was designed to contribute to:

1. The identification of different strategies that were utilized by the planners of change in order to implement individualized schooling in senior secondary schools.
2. Providing guidelines for planning, initiating and implementing change in secondary schools that want to individualize schooling.
3. The identification of supportive and inhibiting factors which change planners must consider carefully when they are designing strategies of planned change to bring about individualized schooling.
4. Providing insight into the complexity of the change process through the identification of components and interrelationships which are significant in this process.

5. Suggesting elements that need to be considered in the development of an eclectic model of change which will be applicable to the educational setting.
6. Providing insight into the different stages of the change process and the variable requirements needed in the different stages.
7. Providing insight into the interrelationship existing among leadership, decision making, and change in the unfolding of the change process.
8. The identification of components needed in the alternative administrative and organizational arrangements which facilitate individualized schooling in secondary schools and some planning strategies capable of implementing them.

Overview of the Study

This chapter included an introduction to the study, the background of the study, the theories and related literature, the statement of the problem, and the significance of the study.

Chapter II presents the design and methodology of the study. Chapter III describes the presentation and analysis of the data for each school and across schools. Chapter IV presents an overview of the study, a summary of major findings, and conclusions with their implications for practice and for further research.

CHAPTER II

DESIGN AND METHODOLOGY

This chapter contains a description of the design and methodology of the study. Included are seven sections: (1) a brief statement of the methodology utilized, (2) a description of how the schools were selected, (3) a delineation of the selected schools, (4) an account of the development of the protocol, (5) a description of the data collection methods, (6) a delineation of the data analyses process, and (7) a consideration of the limitations of the study.

Rationale for the Methodology Utilized

This study used the field study methods of interview, observation, and document analysis to identify and describe key strategies which were operative in the change process of American comprehensive senior high schools which are implementing programs of individualized schooling.

It was one of three companion studies conducted simultaneously during the academic year 1977-78. Daresh (1978) investigated the interaction of extraorganizational and intraorganizational factors as they related to the installation, maintenance, refinement, and routinization of programs designed to individualize schooling, and Watkins (1978) studied the decision-making processes which were functioning within these American senior high schools.

Kerlinger (1973, p. 405) described field studies as "ex post facto scientific inquiries aimed at discovering the relations and interactions among sociological, psychological, and educational variables in real social structures." He viewed field studies as "strong in realism, significance, strength of variables, theory orientation, and heuristic quality" (1973, p. 406). Field studies are of two types: exploratory and hypothesis testing. This study was an exploratory one. Kerlinger stated three purposes for exploratory studies: "(1) to discover significant variables in the field situation, (2) to discover relations among variables, and (3) to lay the groundwork for later, more systematic and rigorous testing of hypotheses" (1973, p. 406). The exploratory nature of this study followed Katz's (1953, pp. 75-83) concept of seeking what is rather than predicting relations to be found.

The findings of this study are viewed as a basis for formulating hypotheses relating planned strategies within the change process to the successful implementation of individualized schooling in American senior high schools. "Verificational studies that test the hypotheses formulated from the field studies are necessary to complete the process of theory building" (Lutz and Iannaccone, 1968, p. 117).

Selection of Schools

Because this research was a field study, the schools are referred to as "selected schools," rather than as a sample. Babbie (1975, p. 203) clarified this distinction as follows:

> The field researcher attempts to observe everything within his field of study, so in a sense, he does not sample at all. In reality, of course, it is impossible to observe everything. To the extent that the field researcher sees only a portion of what transpires then, that which he does observe is a de facto sample of all the possible observations that have been made.

Thus, the field researcher employs what Babbie (1975) referred to as a "purposive sample" wherein a selection is made of observations which, one believes, will yield the most comprehensive understanding of the subject under investigation.

The study was conducted in six comprehensive senior high schools which had attempted to individualize schooling. These schools were chosen from a list of comprehensive senior secondary schools which had been developed by examining diverse professional journals and publications, contacting national and state agencies, and receiving recommendations by experts in the field of American secondary education. About 25 schools were identified as potential research sites.

The six schools selected from this list met at least three of the following operational criteria derived from the list of program components for IGE/Secondary (Klausmeier, 1977):

1. The school had developed an administrative structure designed to facilitate its particular program of individualized schooling.
2. The school had an organization for instruction which provided for shared decision making (e.g., teachers from two or more subject areas meet to plan student programs) and structures are in place which make it possible for teachers to meet regularly and cooperatively make decisions on daily instructional activities.
3. An instructional program had been planned with each student which contributed to attaining the school's and the student's specific objectives.

4. Appropriate curricular materials had been adopted or developed and used to promote student attainment of instructional objectives.

5. The school's curriculum and the student's programs had been improved through the use of systematic evaluation procedures which provide the data required for informed decision making.

6. Effective analyses, communication, and conflict resolution mechanisms between the school and the community existed and were fostered by a planned program of home-school-community relations.

7. Out-of-school and other learning experiences related to the characteristics of the school population had been planned, implemented, and evaluated at district, school and teacher-student levels.

8. Intellectual, technical, material and personal support had been provided by the school district and other educational agencies serving teachers.

9. The instructional program was better understood and improved through continuous research and development conducted by school personnel and cooperating agencies.

Telephone contact was made with each of the potential schools in order to determine: (1) the number of operational criteria that were satisfied, and (2) the principal's receptivity toward participating in this research project. A telephone interview schedule and survey form (Appendix A) were used for these purposes. An abstract which outlined the nature of the proposed research with a cover letter (Appendix B) was then sent to each school contacted. The list of schools was thereby narrowed to twelve.

The final selection was based on the desirability of varying the residential area (urban, suburban, rural), geographic location (east, west, midwest, north, and south), and the size of the districts with the selected school's student population being at least 700 students.

The six comprehensive senior high schools finally selected represented urban, suburban, and rural districts with student populations ranging from 3,000 to over 40,000 students. The schools were located in diverse geographic regions of the United States.

A return telephone call was made to confirm the school's selection and to schedule dates for the research visits. Telephone contact was also made with appropriate central office personnel to make certain that the study had the approval of these agencies. The visit was scheduled so that the researchers could spend at least four school days in the selected site.

Descriptions of the Selected Schools

This section contains descriptions of each of the six schools included in the study. Table 2.1 gives an overview of pertinent background information for all six schools. This table is followed by a descriptive narrative for each school. It includes a description of the city and the district, a description of the school itself, an account of the program which implemented individualized schooling, details of the distinctive way in which the school has implemented its program, and a description of supporting agencies.

School A

City and district background. School A is located in a city of approximately 200,000 people. The city has some manufacturing activity, good transportation facilities, serves as the service center for

TABLE 2.1

BACKGROUND INFORMATION ON THE SELECTED SCHOOLS

	A	B	C
AREA	Mid-sized city	Mid-sized city	Rural
STUDENTS IN DISTRICT	40,000	8,000	3,000
SCHOOLS IN DISTRICT	34 elementary 9 jr. h.s. 4 sr. h.s. 1 alternative	14 elementary 1 jr. h.s. 1 sr. h.s. (9-10) 1 sr. h.s. (11-12)	6 elementary 2 jr. h.s. 2 sr. h.s.
GRADE LEVELS IN SELECTED SCHOOLS	7-12	11-12	10-12
STUDENTS ENROLLED	1,900	1,500	750
ADMINISTRATIVE PERSONNEL	5	10	3
FULL-TIME EQUIVALENT TEACHERS	85	60	60
GUIDANCE COUNSELORS	4	6	3
SOURCE OF FUNDING FOR INITIAL PROGRAM PLANNING	Federal	Federal	State and District

TABLE 2.1 (Continued)

	D	E	F
AREA	Suburban	Suburban	Suburban
STUDENTS IN DISTRICT	11,000	25,000	12,000
SCHOOLS IN DISTRICT	11 elementary 2 middle 2 sr. h.s. 1 alternative	26 elementary 11 middle 8 sr. h.s	9 elementary 4 middle 4 sr. h.s.
GRADE LEVELS IN SELECTED SCHOOLS	9-11	9-12	9-12
STUDENTS ENROLLED	1,300	1,000	1,500
ADMINISTRATIVE PERSONNEL	5	3	5
FULL-TIME EQUIVALENT TEACHERS	60	50	55
GUIDANCE COUNSELORS	4	3	3
SOURCE OF FUNDING FOR INITIAL PROGRAM PLANNING	Federal and District	Private, State, and District	District

TABLE 2.1 (Continued)

	A	B	C	D	E	F
DISTRICTWIDE MINIMUM COMPETENCIES SPECIFIED	No	No	Yes	Yes	Yes	Yes
SCHOOL-OBJECTIVE BASED INSTRUCTION	No	No	Yes	Yes	Yes	Yes
SELF-PACED FLEXIBLE SCHEDULING	No	No	Yes	Yes	Yes	Yes
FORMAL TEACHER-ADVISOR PROGRAM	Yes	No	Yes	Yes	Yes	Yes
SUBJECT DEPARTMENTS	Yes	No	Yes	No	Yes	Yes
A BUILDINGWIDE INSTRUCTIONAL IMPROVEMENT COMMITTEE	Yes	No	Yes	Yes	No	No
TOTAL STUDENT BODY DIVIDED INTO SMALLER SUBGROUPS	Yes	Yes	No	Yes	No	No
SUBGROUPS	9	6	0	4	0	0
CURRENT AFFILIATION WITH A FORMAL LEAGUE/NETWORK OF SIMILARLY ORGANIZED SCHOOLS	No	No	No	Yes	No	Yes

the agricultural region which surrounds it, and is a major government center.

The socioeconomic background of the city is diverse, but the major portion of the population belongs to the middle and upper middle income bracket. There is a small minority population in the city: less than 7 percent of the population is Black, 2 percent is Native American, and 3 percent is Spanish surnamed.

The school district has a total enrollment of more than 40,000 students. There are 34 elementary schools, nine junior high schools, and four senior high schools. There is also one alternative high school enrolling 300 students.

School description. School A enrolls 1,900 students in grades 7 through 12. There are 1,300 senior high school students (grades 10-12) and 600 junior high school students (grades 7-9).

The staff of the school is comprised of a principal, five assistant principals, an administrative assistant, four guidance counselors, and 85 teachers. One of the assistant principals serves effectively as the principal of the junior high division.

The school building, erected in 1967, was designed prior to the adoption of the individualized program. It consists mainly of self-contained classrooms which are allocated to specific subject departments and grouped according to the departments.

Program history. Implementation of the individualized program at School A began in 1973-74. Its initial development was supported through planning and implementation grants under Title III, E.S.E.A.

It also received some conceptual support from /I/D/E/A/-Kettering to design its individualized program.

Individualized schooling. The philosophy of School A stated that "the key to learning and to establishing a healthy learning environment is the interpersonal relationships between the student and his or her teachers." This statement is consistent with the goal of the district, "to provide the higher quality educational program, consistent with . . . the needs of the individual student."

To achieve these goals the school had made changes in its curriculum, teacher-student advisement programs, and administrative and organizational arrangements.

Curriculum. The school had individualized its curriculum by allowing students to select from a wide diversity of more than 300 course offerings. Although the majority of these courses are designed to be full semester (18 week) courses, there are also shorter term, quarter courses, available. Students may choose to take any of the courses at any time during their high school years, with the exception of those classes which are sequenced (e.g., a student may not take Algebra II without first completing Algebra I). The diversity of courses open to students is enhanced by the fact that the state in which the school is located has few graduation requirements for high school students.

School A has also initiated other curricular changes designed to meet the needs of individual students. One example is the use of independent study programs, or cooperatively planned units which may be taken by students either inside or outside of the school.

The school allows students to select two specialized programs if their needs might be better met in nontraditional settings. These are: (1) a small "alternative" school-within-the-school with an enrollment of 35 seniors and juniors who prefer to receive their education in a different manner than that of the traditional environment of the larger school, and (2) a small, interdisciplinary, multiperiod course available to about 60 sophomores who choose to take it.

Student evaluations are based on the criteria established by each teacher in his or her own course. The grading ranges from A through F, with "Pass/Fail" options also available in selected courses. There is no schoolwide attempt at evaluation based on performance objectives, although the staff was discussing a minimum competency policy proposed by the district during the researcher's visit to the school.

Teacher-student advisement program. The school has implemented a teacher-advisor program to improve relationships between teachers and students. Each student selects a teacher to serve as an advisor with whom he or she may work in a close relationship for a period of three years (grades 10-12) to plan programs, to determine resource or curricular options that might be appropriate, and to increase communication with parents.

Administrative and organizational arrangements. The policy of School A states that an important way of developing an individualized school is to reduce the scale of its operations and form smaller units within the school. In order to increase intraschool communication the school is divided into nine learning communities: six for the senior high and three for the junior high. Each learning community has a leader, approximately ten staff teachers from different subject departments, and one building-level administrator who serves as an "administrative facilitator." Students are associated with the learning communities only to the extent that they belong to the learning community in which their teacher-advisor functions. Since the number of students is different for each advisor, the number of students in each learning community also varies.

Learning community leaders, the principal of the school, parents, and student representatives meet periodically as a program improvement committee. This organization is considered to be the ultimate schoolwide administrative and decision-making body.

Instruction in the school is organized through subject departments who have responsibility for developing instructional programs in their subject areas. Department chairpersons meet regularly with the assistant principal responsible for curriculum.

Support agencies. School A does not now belong to any organized league or network of schools. Although /I/D/E/A/ Kettering aided in the original planning and implementation of the individualized program, there is no continuing support relationship between the school and this external agency.

The school continues to receive some federal financial assistance from E.S.E.A., Title IV. These monies are allocated to aid in the evaluation process of a previous Title III grant under which the school operated during the first four years of its individualized program.

School B

City and district background. School B is located in an established city of approximately 50,000. Major industries are agricultural processing and storage, and transport and service industries.

The city faces an economic problem in that some of the largest employers have recently departed, creating an unemployment rate of nearly 14 percent--one of the highest in the state. Thus, the socioeconomic status of the citizens ranges from near poverty to extreme wealth. The minority population of the city, comprising about 10 percent of the population, is Black.

The school district services 8,000 students in the 14 elementary schools, one junior high school (grades 7 and 8), the ninth and tenth grade high school, and School B for the 11th and 12th grade students.

School description. School B enrolls 1,500 students in grades 11 and 12. The ninth and tenth graders attend classes in another building adjacent to School B with a completely separate administrative structure and mode of operation.

Since School B draws its enrollment from all areas of the school district, the socioeconomic status and ethnic balance of its students reflects the community distribution.

The staff of School B includes the building principal, an administrative assistant, six guidance counselors, and 60 teachers.

The building, which was constructed in 1973, was not specifically designed to accommodate the present educational program, but does facilitate the implementation of the school's overall philosophy. A basic tenet is that students should have a diversity of educational alternatives available and the building's mix of self-contained classrooms and open-space areas helped accommodate several educational environments.

Program history. The individualized program at the school was implemented in its present form in 1973 when the new building opened. Preprogram planning was initiated in 1969 with a grant from the school board. The planning and implementation of the current program was financed with E.S.E.A. Title III funds and district support.

Individualized schooling. School B has adopted an educational program that emphasizes "learning by choice." The philosophy "recognizes the individuality of each participant," is designed so that "each individual student may make realistic choices from a wide range of alternatives," and recognizes the "value of differences rather than striving for conformity."

Curriculum. Although the programmatic thrust of School B is not directed specifically toward individualization of the curriculum, nonetheless the philosophy which allows each student to select a learning environment which most closely matches his or her vocational needs and preferred learning mode does afford a program of individualized schooling.

There are six "schools" from which students and staff members can choose to identify. Each school is characterized by an educational philosophy which is reflected in its name: Special Education, Work Study, Vocational, Traditional, Flexible, and Contemporary.

Once a student has selected one of these schools, a process which normally takes place while enrolled in the tenth grade, he or she retains membership in that school unless a decision is made to change. An element of flexibility exists, since not every subject is offered in every school, and students do occasionally go to other schools for part of their daily schedule.

Depending upon the school which the student selects, other curricular features may include flexibility of student grouping (Contemporary School), independent study projects (Flexible and Contemporary Schools), and community learning experiences (Work Study, Vocational, and Special Education Schools). In each school there are courses of varying length: full year, semester or quarter.

Student evaluation is based on the student's attainment of course objectives, as determined by the individual classroom teacher. There is no unifying set of buildingwide or districtwide performance objectives. Grades range from A through F for all courses.

Teacher-student advisement program. Relations between students and teachers are personalized in two ways. First, counseling is available from the guidance counselors who are each assigned to a school. Second, the relatively small numbers of students and teachers found in each school permit an atmosphere wherein students have access to teachers throughout the day for purposes of either academic or personal advisement. Such interaction between teachers and students is evident in all of the schools.

Administrative and organizational arrangements. Directors are in charge of each of the schools. They teach a reduced schedule of classes while coordinating and managing the daily operations of their schools.

The directors meet with the building principal, his assistant, and the coordinator of a federally-funded project housed in the building, to form a schoolwide administrative council. The director of guidance and counseling also serves as a member of this body. Meetings are frequent although they are not scheduled on a regular basis.

There are no subject departments at School B. Instead, instruction is organized according to the schools which are considered to be autonomous structures within the building. Certain staff members have been designated as subject coordinators throughout School B. Their function is to take care of the different managerial tasks normally associated with department chairpersons (inventory control, ordering textbooks, etc.), and to coordinate the courses taught in the different schools.

Support agencies. School B is not affiliated with any formal agency, league, or network of schools. It receives financial support from E.S.E.A., Title IVc. The current purpose of most of these funds is to pay for the diffusion of the program throughout the state. The school has also been actively cooperating with the state university's teacher education program. However, this is the final year of that program.

School C

City and district background. School C is located in a town of 4,000. It is part of countywide school district of approximately 15,000. Since the county's main source of income is agriculture, there is a great number of seasonal employees, hence the population fluctuates.

The principal industry of the county is agriculture and the processing of agricultural products. Another important industry is lumbering and the manufacture of wood products.

There are 3,000 students who attend six elementary schools, two junior high schools, and School C. There is also one K-12 school with 181 students which is somewhat geographically isolated from the other schools in the district.

The socioeconomic levels of the county range from the low incomes of farm and migrant workers to the wealth of the proprietors of farms and processing plants. The racial minorities in the county include 5 percent Spanish surnamed and another 5 percent Japanese Americans.

School description. School C enrolls 750 students in grades 10-12. Most of the students are Anglo (90 percent) and come from rural backgrounds. There are also Mexican-American and Japanese-American students. The majority of the students come from the middle socioeconomic class, although there are some students who come from both the lower and upper ends of the socioeconomic range.

The staff of the school consists of a principal, two associate principals, three guidance counselors, and 60 staff members. The school employs a program of differentiated staffing, so the number on the staff refers to both certificated and classified persons.

The layout of the school buildings is that of a campus design. This was a planned component of the total planning process for implementing the school's educational program. The new school facilities opened in 1970. Classrooms in the main building, most of which are of open space design, surround the school's resource center.

Program history. Planning of School C's reorganization began in 1968. Total implementation of the program began in 1970 with the completion of the new school. With the opening of the new school the district finalized its reorganization into a 6-3-3 system.

The majority of the money necessary for planning and implementing the program came from the school district. Only about 1 percent came from external funding, the statewide administrators' group and the state's region for curricular improvement.

The school has never been affiliated with any league or network of similarly organized schools. The conceptual design for the program was developed internally through a study of current educational practices, inservice sessions with theorists and consultants, and visitations to schools attempting to individualize instruction.

Individualized schooling. The programmatic emphasis on individualized instruction derives from the belief that a school "must provide the opportunity for each student to realize his potential."

This takes place if "each student learns as he learns best, and attains worthwhile goals that are relevant to both the student and society through a continuous set of learning experiences."

Curriculum. In order to individualize its program School C utilizes a number of components.

Each student chooses a career cluster of course groupings appropriate for a chosen vocational preparation or college entrance requirement. The cluster is the skeleton or framework that provides a structure for each student to select relevant learning units which will prepare the student for a career after high school.

Courses are divided into learning units, each estimated to take a student 15 hours to master. Each unit specifies readiness requirements, behavioral objectives, specific (but diverse) learning activities and materials, and itemizes post study performance requirements. Learning units span the scope of minimum and advanced competencies, and embody flexibility of credits, opportunities for sequencing and self-paced learning by each student. Minimum competencies for all subject areas are determined by the state and district.

When each student completes a unit he or she must decide whether to proceed to another unit in the same course, or to begin a different unit in another course. This decision is made through guide-guidee consultation and is facilitated by a computer managed scheduling system.

Student evaluation occurs throughout as well as at the end of each unit and credit is awarded when the ability to meet the performance requirements is demonstrated.

Teacher-student advisement program. Each staff member serves as guide to a group of students. The responsibility of the guide is to assist his or her students in setting goals, guiding day-to-day decisions, providing motivation, and communicating with parents. The guide is considered to be "the one person in the school who knows the individual student as a total human being." The guide meets with the students daily.

Administrative and organizational arrangements. The staff is grouped in six divisions which include: Humanities, Math/Science, Vocational, Media, Guidance, and Health, Physical Education and Athletics. An area coordinator is responsible for overseeing the events and activities conducted within his assigned area as they relate to management. A team leader serves as a liaison between the subject matter group and the coordinator and aids in establishing effective communication between the coordinator and members of his or her area.

Major policy decisions are made with staff participation through a leadership group called the cabinet, which is composed of the three administrators and the six area coordinators.

The principal and two associate principals form a supervisory management team with responsibilities for curricular leadership as well as school management. They meet regularly with area coordinators and, less often, with team leaders to form an administrative cabinet.

Support agencies. The school does not belong to any formal network of schools and maintains no continuing relationship with any particular university. The only financial assistance it receives from the state is to support consultants who aid the minimum competencies program. No other agency provides financial support.

School D

City and district background. School D is located in a planned suburban community. The city, which was incorporated in 1971, now has a population of 40,000, but it is anticipated that it will have at least 200,000 by 1985.

A high percentage of the residents work in other towns and cities in the region and travel considerable distances each day to and from work. There is also an industrial park within the city which provides some office and light factory work for residents.

The largest sector of the population is rising middle class families. A large percentage of these families have two incomes and a remarkably homogeneous socioeconomic level. Another sector, less than 10 percent of the total population, are ranch workers, largely Spanish surnamed, who form the largest minority population.

The present school district took control of the existing schools in 1973. These included one high school and three elementary schools which previously had been components of neighboring districts. Now there are 11,000 students in 11 elementary schools, two middle schools (grades 7 and 8), two senior high schools, and one alternative high school.

The projected increase in the municipal population is expected to increase enrollment in the district schools. The district plans to construct 18 new facilities (nine elementary schools, five middle schools, and four high schools) to house approximately 25,000 students by 1985.

School description. School D is presently an incomplete school. It began operations with only ninth grade students during the 1975-76 school year when classes were held in another building. The doors of the new school opened in 1976. Currently, it has 1,300 students in grades 9 through 11. There is a projected enrollment next year of 1,800 students with grades 9 through 12.

Approximately 10 percent of the student body is from minority groups. Of those, 60 percent are Black, 30 percent are Spanish surnamed, and 10 percent are Oriental.

There are now 60 teachers, a principal, four assistant principals, and four guidance counselors. The administrative and counseling staff will have the same structure next year, but at least 20 more teachers will be added.

The school building, completed only this year, follows a campus design. Separate buildings, each featuring a combination of open space and self-contained classroom arrangements, are allocated to the various subject disciplines. The building was designed concomitantly with the design of the school's educational program.

Program history. Throughout the short history of the school it has been affilitated with a state network of demonstration schools. Each of these schools has been designated as a school which is designed to address state legislation mandating the implementation of minimum competency instruction and personalized approaches to learning. The school receives additional financial support from the state to maintain its program.

Individualized schooling. The school district is committed to provide learning experiences which accommodate wide variation in abilities and learning styles found in students.

Performance Objectives have been developed in different subject areas that must be met by each student (K-12). Schools and teachers across the district have wide latitude regarding how and when students are directed toward the objectives.

School D expresses the philosophy that each student has unique and divergent needs and that each student needs a close, personal contact with an adult in the school to whom he or she can relate. The school has adopted curricular and teacher advisor programs as well as administrative and organizational arrangements to implement that philosophy.

Curriculum. There is wide diversity of courses, over 150, from which a student may choose, although some courses require prerequisites. Each course is given a level of difficulty rating from 1 to 5 which allows students to determine courses appropriate to their interest and level. The length of each course is specified in terms of the number of quins (nine weeks) over which it extends, and students also are able to choose which quin is most suitable for them to begin the course. Courses include options as to what learning objectives will be pursued and options regarding how objectives will be met.

The school lists minimum competencies required for graduation. Alternative learning activities are available for each competency. A student who does not demonstrate mastery of the minimum competencies is required to attend remedial programs.

Many courses are offered on a variable credit basis. A student may earn more or less than the usual number of credits for the class, depending on the extent to which he or she meets the specific, measurable course objectives. Students are evaluated (A through F) on the merits of the quality of the work, not on the number of objectives attained.

Teacher-student advisement program. Each staff member in the school is an advisor and each student has an advisor. With the exception of ninth graders during their first nine weeks in the school, students select the advisor with whom they meet daily.

The advisement program is designed so that each student can identify with one adult in the school who will assist him or her in assessing needs, selecting courses, setting long-range goals, and communicating student needs to the school as a whole. Advisors are the primary contact between the school and the parents.

Administrative and organizational arrangements. The basic component in the entire organization is the advisor group, 20-25 advisees with each advisor. The school is divided into four units with an advisor being a member of one of the four units and, consequently, each of his advisees is also a member of that same unit. A cross-section of staff comprises each unit. Each unit has a unit principal, a unit counselor, approximately 20 teachers and 450 students.

The unit principal is responsible for working with the teachers and students assigned to the unit. He or she evaluates the teachers in the unit and deals with the individual problems of students in the unit. The unit principals as a group are responsible for the day-to-day operation of the school, with each unit principal performing certain schoolwide functions.

The program improvement council is the primary decision-making body of the school. The membership of the program improvement council is composed of the school principal, one unit principal, one certificated staff member elected from each unit, one student and one parent from each unit, one certificated staff member elected at large and one classified staff member elected by the classified staff.

Other functioning bodies in the organization are: the budget advisory council, the student forum, the school advisory forum, the unit staff, and the activities council.

Support agencies. The school, through the state department of education, serves in a cooperative relationship with seven other schools around the state. All of these schools are designed principally as demonstration sites for competency-based and personalized education programs. These programs, although not officially mandated at this time, are encouraged by the state which gives additional financial assistance to high schools in the state for the purpose of adapting similar programs.

Additional supportive relationships are maintained by the school with consultants from nearby universities. The district provides money for these kinds of services.

School E

City and district background. School E is located in a recently developed planned community located between two major cities. The community is essentially a dormitory suburb with some light industry and a rapidly disappearing agricultural district.

The population is multiracial with approximately 60 percent Anglo and 40 percent Black. They are mostly upper middle class with a large number of professional families.

The school district has a total of 25,000 students enrolled in 26 elementary schools, 11 middle schools and 8 senior high schools. The district is a large countywide system so that although most of its schools are located in the same urban area as School E; there are a number of rural schools.

School description. School E enrolls 1,000 students in grades 9 through 12, representing the same ethnic distribution found in the community.

The staff comprises a principal, an assistant principal, an administrative assistant, three counselors, 50 teachers, and 10 aides.

The building, while not designed specifically for the program it now houses, has been able to meet the demands placed on it by the present curriculum. There are large open spaces which the staff have adapted to implement the requirements necessary for individualizing programs. The learning center is close to the instructional areas. Faculty planning and work stations are located centrally and within a single open space area. There are no long hallways; access to any part of the building is easy and open.

Program history. The conceptual plan for the school, developed in 1971, was generated internally with consultant assistance. Some of the consultants were from the National Association of Secondary School Principals (NASSP) and subsequently the school became a member of a nationwide group of high schools which served as demonstration sites for innovative secondary practices under the auspices of the NASSP.

Financial support for the initial planning came from the district and the Educational Facilities Laboratory.

Individualized schooling. Since its beginning, the school has been committed to a program of individualized schooling and has continued to develop and modify its model as needs have become apparent. Initially, it attempted to provide each student with an opportunity to make continuous progress through the curriculum by the use of various learning materials. The school has now altered that focus by providing for both individual and group oriented instruction since experience showed that not all students were able to take advantage of the independent individualized instruction offered. The provision for group oriented instruction was in keeping with the ideal of providing for individual differences.

Curriculum. The present curriculum has a number of features which seek to meet individual student differences: (1) the curriculum is nongraded, (2) multilevel courses are available which allow students to begin courses at whatever level of ability or interest is most appropriate for their needs, and (3) multiactivity courses offer students variety in the activities available to attain certain objectives.

All courses are "phased" so that students may select the appropriate level of a course to fit their needs. The courses range from levels designed for students who need much personal help and attention in the basic skills, to college level courses, and to those where student interest and motivation is the only requirement.

Students not demonstrating a basic proficiency in reading, writing, and/or mathematics while they are in the middle school are required to take special classes when they enroll in School E.

Another program is designed to give the student an opportunity to pursue in depth an area of interest of his or her own choosing through an independent research study project. Vocational programs are offered off-campus.

Evaluation is done according to the extent to which students attain course performance objectives. Grades range from A through C. Students who do not achieve at least a C repeat material until they are able to achieve a passing grade.

Teacher-student advisement program. Every teacher and administrator acts as an advisor to approximately 25 students. Each advisor group meets daily and additional time is provided in the advisor's daily schedule for conferences with students. The advisor personally deals with each of his or her students and keeps track of student academic progress, attendance, and other matters.

Advisor groups are grouped together to form three clusters within the school, each under the supervision of one of the guidance counselors. Advisors refer students to the appropriate counselors if they are unable to cope with a student's particular problem.

Administrative and organizational arrangements. School E has a supervisory management team, led by the principal and consisting of the other administrators. Responsibility for curricular leadership rests with the principal.

The school has no schoolwide policy-making body; however, department chairpersons meet regularly with the principal to communicate, raise issues, and recommend procedures. They provide leadership in the area of curricular development required to meet the individual needs of students.

Support agencies. The school maintains a relationship with the NASSP; however, no financial assistance is received from the Association.

School E and two other schools have been designated by the district as model schools for the purpose of demonstrating curricular, advisor, and staffing patterns to other schools in the district. Because of this designation, the school receives additional support from the district in the form of extra instructional and clerical aides, and financial support to allow the school to hire national consultants.

School F

City and district background. School F is located in a suburb of a major southern city. The locality is partly industrial and partly residential, with some heavy manufacturing and transport industry. Residents are either employed locally or in the diversified occupations of the neighboring city. The predominantly lower middle class population is mostly white; five percent is Black.

The school district, which is coterminous with the county, has a total enrollment of 12,000 students in nine elementary schools, four middle schools, and four senior high schools. There is also a community college operated by the district which offers a two-year course of study applicable toward a bachelor's degree.

School description. School F enrolls 1,500 students (male only) in grades 9 through 12. Nearly all of the students are white.

The staff is composed of the principal, four assistant principals, 55 teachers, three guidance counselors, and 45 aides (including paid student teachers, instructional aides, and clerical aides).

The building consists of two sections, each designed according to different educational philosophies. The older section, constructed in 1963, consists of self-contained classrooms and offices; the newer section, built in 1970, consists of large open spaces with some partial visual screening and some specialized areas for student testing, etc. A section of the building is allocated to specific subject departments.

Program history. The current educational program is the result of two educational change periods. The first period, from 1967 to 1969, was marked by the utilization of team teaching and interdisciplinary approaches to curriculum. The current program emphasizes continuous progress and was implemented as the result of a districtwide commitment to a K-12 continuous progress project begun in 1968. The school received additional financial support from the district throughout its changeover to the present program.

The school was affiliated with NASSP from 1969 to 1974. This organization provided little financial support--only the funding of the six-week staff development workshop and providing consultants who visited the school frequently during its planning stages.

Individualized schooling. The continuous progress program implemented by the school was mandated by a districtwide policy. The program is intended "to eliminate grade levels and to provide individual students with opportunities for continuous progress without failure."

Curriculum. Course offerings are comparable to those in most other high schools and certain vocational courses are available at nearby vocational educational centers.

The district provides course guidelines which establish minimum competencies and suggest course content and methodologies. The school organizes instruction into nine-week periods, although students are encouraged to complete the units earlier if they can. They are not required to complete them within any prescribed time.

Each course is developed in a number of learning packages which indicate the appropriate grade level, and outline the purpose of the unit, objectives to be achieved, subject matter to be covered, activities and materials to be used, and indicate the required performance tests. Instruction may occur in large group presentations, in small study groups, or in independent study. Each student's progress may differ regarding the rate at which one learns and the time spent mastering the unit. The student plans and revises his flexible schedule on a daily basis.

When a student has completed a unit or has reached a point where he must wait for the next group activity, he may move to another subject area to either complete a unit or begin a new one. A unit is completed when he takes the appropriate test which is used for evaluation purposes. Grades which range from A through F, with I (Incomplete) also a possibility, and progress reports are distributed at the end of each quinmester with additional reports given as the student needs it or the parent may request one.

Teacher-student advisement program. Each student is assigned to a teacher-advisor who functions as advisor to approximately 35 students on a daily basis throughout their four years at the school. The function of the program is to establish a close relationship between teacher and student, to maintain an up-to-date information record, to plan the student's program, to monitor his achievement, to assist weekly with planning the student's flexible scheduling, and to increase communication with parents.

Administrative and organizational arrangements. A number of formal structures and role responsibilities facilitate the administration and organization of the school.

The principal maintains responsibility for the overall educational leadership and administration of the school, although specific areas are delegated to the four assistant principals.

The school is strongly departmentalized. Each group of teachers, led by a department chairperson, has responsibility for implementing the school and district's philosophy of continuous progress and individualized instruction in their own subject areas. They develop and maintain courses and devise teaching methods, materials, and evaluation procedures.

The department chairpersons meet frequently with the principal at which time there is an exchange of information, issues, and attitudes regarding the school's curricular and operating procedures. The principal communicates directives from the central office as well as his own, and there is opportunity for problems to be discussed along with proposed solutions.

In lieu of regular general faculty meetings, the principal and his assistants meet regularly with each department. This is done to promote a more productive flow of discussion than would be possible in a large group setting.

Support agencies. School F maintains a close relationship with six other schools around the country which were once affiliated with the model schools of NASSP. The relationship allows the schools to share common concerns, information, and practices relating to the implementation of their individualized programs. The central office provides the necessary funds to continue this relationship.

Protocol Development

The data for this study were gathered through the use of interviews, observations, and the content analysis of documents obtained. The primary instrumentation that was used for gathering the data was an interview protocol (Appendix C) which was used in each of the schools.

Documents or any other pertinent written information that was available concerning the school's program and change process were obtained. These helped to provide verification of factual information that was obtained through the interviews, to fill in gaps that existed in people's memory, and to explicate the more formal conceptual basis for the change process. The greatest amount of written information seemed to be available for the planning stage of the change process; it rapidly decreased as the process moved from the planning stage to the implementation stage.

The following section describes the pilot study that was undertaken to refine the interview protocol. Next, there is a description of the protocol, followed by an explanation of the selection process for obtaining the respondents, and finally an explanation of how the developed interview protocol was implemented in the selected schools.

Pilot Study

A pilot study was conducted at one senior high school which met the requirements for the operational criteria for individualized schools. Katz (1953, p. 83) cited three purposes for a pilot study:

> (1) to develop the procedures for applying the research instrument so that, for example, the scale or schedule can be used effectively with respect to the time it takes to administer, (2) to test the wording of questions so that they are suited to the understanding of the audience, and (3) to ensure, as far as is practical, that the specific questions or observations are really getting at a variable for which a measure is needed.

The greatest emphasis in the pilot study centered on Katz's second purpose, "to test the wording of questions so that they are suited to the understanding of the audience." His third purpose was applicable in the sense that it was necessary to scale down the number of questions that would be asked. It was important to determine the questions that were most productive in eliciting the type of information that was relevant to the analysis of the change process and the strategies utilized within that process. The third purpose also pertained to the necessity of determining whether all of the pertinent questions were being asked.

Since there was no pretested instrumentation to be used by the researcher in this first school, only questions which were gleaned from the literature or based on the researcher's own experiences were used. The process, therefore, served as a way in which unclear questions could be clarified, unnecessary questions eliminated, and unthought of questions added. The result of this process was a formal interview protocol which was to be used in subsequent schools.

The following basic research questions were used as the basis for the development of the original interview protocol (Appendix C):

1. What precipitated the change process to create individualized schooling in the school?

2. Who were the key individuals responsible for creating and for implementing the strategies needed to bring about individualized schooling?
3. What organizational strategies were employed to bring about the existing educational practices in the school which facilitate individualized schooling?
4. What were the major identifiable supports and constraints which affected the implementation of the strategies initially proposed?
5. What strategies, if any, would be done differently or added in order to produce the desired change, and why?

The pilot study was conducted by the three researchers interviewing, observing, and analyzing documents. Frequent discussions were held among them for the purpose of comparing their perceptions of the data.

All questions and responses were recorded using mini-cassette tape recorders. After the pilot study, the questions and answers were reviewed so that a modified content factor analysis could be performed on the material to ascertain precisely which questions elicited the most comprehensive answers relating to these objectives of the study. The questions which were judged as the most relevant were then used to construct the formal interview protocol that was used throughout the research.

Interview Protocol

The interview protocol was intended to provide a framework for the collection and analyses of data concerning the initiation, planning, and implementation of the planned change process in the senior high schools which were implementing programs of individualized schooling.

The interview protocol consisted of the following ten questions:

1. Would you describe how the change was initiated in your school?
2. Who were the key persons responsible for the change?
3. What strategies were used to bring about this change in your school?
4. Can you identify any factors which you think helped to support the changeover to these new concepts?
5. Can you identify any factors which you think hindered the changeover process?
6. What positive effects have resulted from the change?
7. Were there any negative effects?
8. From your present perspective, what things, if any, do you think should have been done differently?
9. Are there any other aspects of change which I haven't touched upon in our discussion which you think are important and should be considered?
10. Whom would you recommend that I talk with in order to have a better understanding of the change process that took place?

These questions were asked during each interview but the interview was not limited to these questions. Probing questions were asked when appropriate in order to seek clarification of vague or incomplete statements by the respondent, or to seek examples which would illustrate a concept the respondent had discussed. Questions were also asked of later respondents to check for verification of information that had been received from earlier respondents.

Respondents

The process used to identify the respondents was called by Hunter (1953) the reputational technique. Using this technique, selected persons involved in the change process were asked to identify, according to their knowledge, the persons who understood and influenced the change process. Key persons identified by respondents were then interviewed. This technique was combined with the segmented decision-analysis technique used by Dahl (1961) to ensure that a person from each of the following categories was represented: (1) administrators; (2) leadership position staff members, i.e., department chairpersons; (3) staff teachers; and (4) guidance counselors. Kimbrough (1964) stated that a researcher is well advised to employ a technique that uses both the reputational and decision-analysis data.

The specific procedures used in the interview process are described more fully in the following section along with a description of other methods used to collect the data for the study.

Data Collection

The exploratory nature of this study required that a methodology be used which enabled as many important variables as possible to be identified and investigated, and the relationships among them discovered. The method used to collect data from the respondents was the semistructured open-ended interview technique. Sharp (1973) felt that the depth of information produced through one open-ended question often is far superior to that obtained by even an extended series of closed questions on the same topic. Fox (1969) indicated that this is the most appropriate method when the researcher's purpose is to seek information at the surface or subsurface level. In this instance, well chosen and well worded questions represent the most efficient and effective data-gathering method.

Each of the six schools was investigated simultaneously by the three researchers over a three- to six-day period.

Visits were scheduled over the four-month period from October (1977) through January (1978). During each visit, formal and informal interviews and observations were conducted and documents were collected.

Interviews

In addition to the basic interview protocol which has already been explained, each interview session also consisted of an introductory section which sought basic demographic data about each respondent and provided a respondent's profile in terms of age, sex, teaching experience, etc. A copy of the individual profile form is included in Appendix C.

The introduction to each interview followed the sequence of procedures recommended by Cannell and Kahn (1953, p. 354):

1. The purpose and objectives of the research were explained.
2. The method by which each respondent was selected was described.
3. The agency with which the researcher was affiliated was identified.
4. The anonymous and confidential nature of the interview was assured.

In addition, each person interviewed was given an explanation for and asked to sign the Informed Consent Form (Appendix D) as required by the University of Wisconsin-Madison. This form is meant to assure the protection of any person from being exposed to risk in any project supported by the United States Department of Health, Education, and Welfare.

The formal interviews were scheduled for one-hour periods, but in fact, ranged in duration from 25 minutes to nearly three hours. A daily schedule form (Appendix E) was used to account for the use of the day and to schedule the interview. The interview protocol was used with each person, but allowances were made for divergent but related discussions and rephrasing of questions occurred where necessary (Kerlinger, 1973).

Answers to the interview questions were written on field note pads. Tape recorders were also used as one more way to preserve information and precise statements made by the respondents. Iannaccone

(1977) noted that the use of such mechanical devices was acceptable in field methodology so long as the recorder was unobtrusive and the respondent knew in advance how to control the "on-off" switch.

The researchers also discussed various interviews after each day in the school, comparing notes and listing any new probing questions deemed necessary. Complementary information from each researcher's notes was shared and recorded.

Informal interviews took place in many situations with many different people whenever the opportunity arose. Notes of the discussions that transpired were generally recorded at a later time in writing.

On a number of occasions, the researchers were sought out for further discussion by different members of the staff. This motivation to discuss further the topics covered in the interview was described by Cannell and Kahn (1953, p. 357) as follows:

> Such motivation sometimes occurs because the interview offers the respondent the opportunity to talk about topics in which he is interested but usually do not obtain adequate expression. . . . the respondent obtains satisfaction from talking with a receptive, understanding interviewer about something in which he is interested and in which he is involved.

Perceptions gained at such times were valuable in that open communication allowed for a free flow of ideas.

Observations

Observations were made of all meetings conducted within the schools during the researchers' visits. These included faculty meetings, subschool meetings, principals' and assistant principals' meetings, school board meetings, etc. Members of the meetings observed were made aware of the researchers' purposes prior to the meeting time. The point was emphasized that objective rather than evaluative data were being recorded and that it was hoped that the meetings would be conducted in the usual manner with no changes made because of the researchers' presence.

Special precautions were made to keep the observation activities from interfering with meetings, as suggested by Heynes and Zander (1966, pp. 382-383). These included sitting as far away from the group as space permitted, avoiding conversations during the meetings, and repressing any reaction that might have conveyed an attitude concerning the activities of the meeting. Every attempt was made to appear non-threatening to the groups observed.

When possible, meetings were recorded on tape. This procedure was helpful in that notes could be taken with regard to both the researchers' general impressions of the proceedings and to the substantive issues which were being discussed. The researchers took field notes regarding the conduct of the meeting and the behavior of the participants while comments and statements relating to agenda items were mechanically recorded.

Analysis of Documents

Minutes and agendas of meetings, program descriptions, curricular groups, school newsletters, learning packages and any other pertinent documents that were available were collected at each school.

These data were considered valuable in that they provided a record of events collected by persons other than the investigator and took place in a "natural" social setting (Angell and Freedman, 1953). McCall and Simmons (1969, pp. 322-323) noted:

> Often such documents are superior to informants in that official reports and statistics cover sectors of the organization beyond the sphere of the particular informant, are based on regularized procedures often under external audit, and are more precise than the informant's memory.

The documents that were collected and analyzed gave some historical perspective to the operation of the schools and districts.

As McCall and Simmons (1969, p. 63) warned, however, "documentary surrogates for informants . . . are usually incomplete, unsystematic, and tantalizing but tangential." This proved true during the collection of data and the subsequent content analysis. In many cases, schools did not distribute comprehensive documents and group meetings did not provide minutes or agenda.

The analysis of documents tended to serve several purposes:

1. Reviewing the documents provided an historical perspective of the activities of the high schools.
2. The data provided insights into what information was distributed and how it was communicated to the staff, the public, or subsystems within each.
3. Systems of data maintenance were noted so that priorities and methods of communication reflected by these documents could provide information concerning the operations of each school.

Any discrepancies and unique events that occurred were recorded for further questioning.

Analysis of the Data

Lutz and Iannaccone (1969) noted that in a field study, data gathering and analysis take place simultaneously. This was amplified by Bollins and Marshall (1973, p. 61) as follows:

> Analysis seeks to discover the components of a phenomenon, the basic elements that underlie and explain a complex changing issue . . . It can entail, for example, finding relations between parts, comparing parts, seeing patterns, and discovering inconsistencies and gaps. Analysis sifts the evidence to find basic elements.

The research data were analyzed by extracting important and recurring information from the responses to the interview questions which were believed to be important to the investigation. Thus, the data "are classified in some systematic fashion so they can be examined together to see what they look like collectively" (Brandt, 1972, p. 189). This process of analysis had the objective of converting "raw" phenomena into data which could "be treated in essentially a scientific manner so that a body of knowledge can be built up" (Cartwright, 1953, p. 435).

Although no one theory adequately explains the strategies utilized in the planned organizational change process in senior high schools, there are constructs borrowed from a number of conceptual models of change which serve to explain some of the phenomena witnessed by the researcher in the field. The interview responses reflected many of the same concepts. When major variables were determined and found to relate to all schools, the data were presented across schools and viewed in the broader context of the major theories which lent their construct definitions to the study.

The raw data for each interview question were examined for each school and across schools according to the responses of the respondents interviewed, the field notes, documents, and observations of the researcher. Propositions were deduced and anecdotal comments and descriptions to support them were recorded. Finally, general statements were made about the concepts being investigated.

The data were investigated within and across schools so that important relationships could be investigated and those additionally discovered could be documented in this study. Finally, the findings and implications drawn from the analyzed data will be stated.

Limitations of the Study

The first limitation of the study centered around the fact that representativeness was questionable as a result of the few cases that were under consideration. This small number does not allow for valid generalizations to other populations until specific hypotheses are stated and proper sampling methods are used so that these hypotheses can be tested (Isaac and Michael, 1971).

The second limitation dealt with the researcher's susceptibility to bias in accurately reporting and analyzing what was seen (Lutz and Iannaccone, 1969, p. 117).

A third related limitation was the possibility that inaccurate information was given to answers in the interviews because of a variety of personal concerns that the respondents might have had. These concerns might have been reflected in changed behavior rather than typical behavior on the part of those being interviewed and observed.

The fourth limitation was related to the lack of a central, unifying definition of individualized schooling. Each of the schools studied had different operational definitions of this concept. As the result of not having a general model for purposes of analysis, comparability across all six schools was difficult.

A fifth limitation involved the differences in time phases of the change process taking place in the six schools. Some of the schools were just implementing their individualized programs, some had had their programs developed for several years, some were in a refinement phase, and others had individualized programs which were in the stage of retrenchment. Such differences in the time phases of the programs made it exceedingly difficult to make generalizations across all schools.

A sixth limitation centered on the timing of the data collection in the schools. Specific problems that evolved at the time that the researchers were in the schools may have caused atypical patterns of behavior and responses.

A seventh limitation was related to the fact that some of the key persons involved in the initiation of the change process were no longer in the school or the district so were unable to be interviewed.

An eighth limitation was the time period over which the interviewees were asked to recall. Their perceptions could have been clouded over time and the recall of accurate factual data was not always able to be ascertained from their memory.

Since this was not an in-depth case study of each of the schools, the time limitation factor of the school's visitation by the researcher allowed only a limited number of persons to be interviewed. These were the persons who were identified as important in the change process. There might have been different perceptions by teachers or persons not directly involved in the planning of the change process or its implementation.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

In this chapter the presentation and analysis of the data obtained from six case studies are discussed in terms of the following five categories: (1) how the change was initiated, (2) persons responsible for the change, (3) change strategies used with observations on those factors which helped to support the change and those which hindered it, (4) things that should have been done differently, and (5) outcomes of the change in view of positive effects. These categories reflect the research questions that were asked the respondents. The data from the schools were collected by means of semi-structured open interviews and the classification of responses was determined by the research questions.

Since this study was concerned with the overall process of change that took place within the school over a period of time, it was not deemed appropriate to identify a particular change phase for the school because a change phase is generally related to a specific change or innovation. On the other hand, one must have a feel for where the school found itself in the overall change process that was considered in this study. In order to accomplish this and to provide a time frame reference for events which occurred within the change process of each particular school, six change time frame tables will be presented. There will be one table for each school in the study. The table will be presented in the first section at the beginning of the discussion of how the change was initiated in each school. Each table will be a skeletal chronological framework for the school, relating specific events within the change process to the time period in which they occurred. This provides the timeline that respondents used as a reference in discussing the change process. The school-specific tables will be used as the historical backdrop for the events discussed in the remainder of the chapter.

In asking the respondents about change, the investigator did not identify a specific innovation. If the respondent asked, "What change?" and this was infrequent, it was clarified by the researcher simply as the change process that was necessary to bring about the individualized schooling that now existed in the school. This clarification satisfied all respondents, and they proceeded to answer the questions in terms of how they perceived the change process as having taken place. The change time frame table for each school gives the initial starting point that respondents generally used for talking about the change process.

Schools are identified only by letters of the alphabet and persons are identified by role title to guarantee anonymity to the participants. Some direct quotes of respondents are included where they are pertinent. The chapter is divided into five sections. The first is a school-by-school presentation of how each school initiated the change process. The change time frame table is given at the beginning of each school's discussion. The second section identifies key change agents in the change process with examples being drawn from the schools studied. Not all of the persons identified by the respondents were still present in the school at the time the researcher was there but all those who were present in the school system were interviewed. A summary table is then given showing the roles across the schools. The third section relates change strategies that were used by the schools in the change process. Specific strategies are presented with examples being drawn from the schools. Then, each school is considered separately with reference to the factors which helped and the factors which hindered the change process in that school. The fourth section relates comments from specific schools about things that they would have done differently. The final section relates the positive outcomes of the change process with examples being drawn from the schools.

How the Change was Initiated

This section includes a school-by-school treatment of the change process.

School A

Table 3.1 gives the change time frame for the program in School A.

During the 1972-73 school year the principal set up task groups which were "looking at different kinds of changes, at ways

TABLE 3.1

CHANGE TIME FRAME - SCHOOL A

Timeline	Event
1972-73	Task forces were organized to look at new educational concepts and models for change. Work was being done on writing the proposal for Title III funding. This was a planning year for the staff. A vote was taken during the second semester.
February 1973	The operational proposal for Title III was completed. In the Spring of 1973 the new organizational arrangements were laid out.
Summer 1973	An orientation and inservice workshop for the faculty was held for five weeks. It was optional. About 60 percent of the faculty were in attendance. These staff members studied the IGE model, developed "We Agree" statements, and put together an Advisor Handbook. These staff helped inform the others about the change concepts during the orientation days for the opening of school.
1973-74	This was the first year of the Title III project. Inservice was held for the staff during the year. The Program Improvement Committee was put into operation. Learning communities were put in place. The advisor program was initiated. The quarter system was adopted. Cooperative planning units were developed. The administration contracted with the staff for curricular development during the year.
Summer 1974	The first clinical was held for a three-week block of time. There were four teams with about six to eight staff in each team with about 60 students.
1974-75	This was the second year of the Title III project. During the second semester the second clinical was run during the last two periods of the day with students getting credit for participating. Inservice programs for the staff were continued.

TABLE 3.1 (continued)

Timeline	Event
1975-76	This was the third year of the Title III project. The community advisory committee was put into operation. The principal resigned at the end of the year.
1976-77	Validation and dissemination for the Title III project was conducted. The new principal came on board.
1977-78	This was a year of review and assessment. Learning communities were reformed for the fourth time. The Program Improvement Commitee was restructured.

of organizing time and curriculum, and at some ideas on advising." This came about because of "some concern expressed about better meeting the needs and interests of our students." There was an elected Faculty Advisory Committee (FAC) that met regularly with the principal. The work of the task forces was transmitted to the FAC.

The principal had become aware of the IGE model which "involved a lot of the same things that the task forces had been looking at in separate pieces." Regular staff meetings were being held and at one of the meetings the staff was presented with the concepts of the IGE model. They were approached with the idea of working with this model in their change process.

While the ideas were being discussed among the staff, a small group was in the process of writing a proposal for Title III funding in order to obtain resources to help them bring about some changes within the school. The IGE model was incorporated into the proposal that was to be submitted. The proposal was presented to the staff during the second semester and "there was a kind of a vote taken on whether we wanted to try it."

With regard to the vote that was taken there seemed to be no clear idea among the respondents of what the vote was actually determining. One person said, "I thought that we were saying by the vote that we were committing to try." Some felt that they voted to accept "the total package." Another related, "An administrative decision was made. Suddenly we were into it. We just kind of moved into it like a bull in a china closet." The original project director of Title III recalled:

> There was a vote before the proposal was finally submitted. There was confusion regarding the voting which presented problems because different people thought they were voting for different things. Some thought they were voting for the program. Some thought it was for the effort for a year or two. Some thought they were voting only on the first phase of the program, the advising, and would do the same thing with each step.
>
> Another point that complicated the issue was that some staff were really voting on a vote of confidence in the principal. If he thought the program was something good, then that was good enough for them.

The vote seemed to be the factor that actually launched the total staff into the change process. The lack of understanding on the part of the staff about what the vote meant was something that would plague the change process even until the present time.

It should be noted that the amount of time that elasped from when the task forces were formed to when the vote was taken on the written proposal for the change program was relatively short.

School B

Table 3.2 gives the change time frame for the program in School B.

Change, as a process, began in 1970 with the formation of a committee of teachers and administrators to study innovative and creative educational programs and practices in secondary education. The membership contained elected representatives from the various subject departments. They received an $8,000 grant from the board of education which permitted them as well as other teachers to visit innovative schools, to bring in progressive educational leaders from around the country or consultants to speak and interact with the staff, to attend national conferences, and to develop materials.

An outgrowth of the work of this committee was the development of inservice workshops for teachers. These workshops involved studying creative and innovative educational practices. They were organized and directed by the department chairpersons.

TABLE 3.2

CHANGE TIME FRAME - SCHOOL B

Timeline	Event
1969-70	Seventeen secondary school teachers and administrators formed an exploratory group to look at the different types of innovative secondary educational practices. They received an $8,000 grant from the School Board which allowed them to visit programs in other schools, attend conferences, develop materials and employ consultants.
December 1970	A proposal for the Project to Individualize Education (P.I.E.) was submitted to the Title III agency.
1970-71	A planning year for P.I.E. to develop a program to individualize education.
Summer 1971	A 6-week workshop was held for the future P.I.E. teachers in grades 7-8 and 10-11. Two P.I.E. schools were developed at the workshop. One was for the junior high and the other for the senior high.
1971-72	P.I.E. was introduced on an optional basis in grades 7-8 and 10-11. Students were chosen through random choice. The teachers obtained permission of the parents and students prior to September. There were 150 students in each grade with one counselor with the senior high school. Education by Choice's (E.B.C.) first vote was taken with the whole faculty. A number of the senior high faculty signed a petition and presented it to the principal to move ahead with the exploration of the concepts involved. The E.B.C. Grant was written as a planning grant this year and Title III funding was obtained. A committee of elected faculty members with administrators was to formulate an acceptable model for E.B.C.

TABLE 3.2 (continued)

Timeline	Event
Summer 1972	The committee participated in six to eight weeks of workshops. There were three weeks of workshops for the teachers of grades 7-12 where the different schools were developed based upon different teacher's philosophy and their own environment, with about 90 percent of the staff participating.
1972-73	The vote for the E.B.C. plan was taken in November and done by building staff.
Summer 1973	A workshop for four to six weeks for all 11-12 staff was held with about 75 percent attendance. Also held were two-week director workshops.
1973-74	The new building opened with grades 11-12 in attendance. E.B.C. was put into operation in the grades 11-12 with seven alternative schools. The school district went into a 2-2-2 system from a 3-3 system.
Summer 1974	A three week workshop was held for all 11 and 12 grade teachers with about 75 percent attending.
1974-75	During this year there were several director's workshops to help evaluate and refine what was taking place with E.B.C. The P.I.E. funding ended this year. The Fine Arts school was dropped at the end of this year.
1976-77	The E.B.C. program was diffused.
1977-78	The P.I.E. school is now called the contemporary school.

As the work of the committee progressed and a plan emerged for a program to initiate changes in the secondary schools, it became clear that the district would not be able to finance any program of an extensive nature. In their search for adequate funds they were directed to the Title III agency. A proposal was written and submitted to that agency requesting funds to establish a program to individualize education in the secondary schools in the district. This program became known as the Project to Individualize Education (P.I.E.). It was a flexibly scheduled program, emphasizing individualized instruction and the affective domain.

Funds from Title III allowed a six-week workshop to be held during the summer for the prospective teachers who had volunteered to be in the P.I.E. program. During this workshop the teachers developed the model for the P.I.E. school and prepared the organization for the school to be started in September. There was a P.I.E. school developed for grades seven and eight in the junior high school building and one for grades ten and eleven in the senior high school. The teacher-advisor concept was an integral part of the program.

The experience of the first year indicated that the P.I.E. concept "was not for all kids or all teachers." The project operated like a school-within-a-school and only involved about 150 students at each grade level. The question gradually emerged, "Why not create different educational environments based on different philosophies and have these available for both teachers and students? It would be like an educational smorgasbord from which to choose."

Different models were developed by the assistant superintendent and the secondary administrators during the beginning of the school year. They presented a three-school model, which consisted of a traditional, an open, and a middle-of-the-road school, to the faculty at general faculty meetings during October and November, 1971. When these ideas were fully presented to the staff a faculty vote was taken by building level to determine whether they wanted to implement this kind of environment. The junior high faculty said "No" and the senior high teachers first said "No" but then said: "Hey, the idea of having those types of options is not really that bad, so let's look at the idea." A group then passed around a petition among the senior high staff for the proposition of looking at the concepts involved and about 90 percent of the staff signed it. The result was that a ten-member steering committee was elected to work with the three senior high administrators and the assistant superintendent on developing the concepts.

This committee met frequently to explore the concepts that were presented in the original three-school model. They also wrote a planning grant proposal and submitted it to the Title III agency. They subsequently received funding for this project which became known as the Education By Choice (E.B.C.) project. When the committee began working on the planning of the E.B.C. model the junior high staff were invited to participate and they elected to do so. This resulted in a larger planning committee and students were also invited to participate, so six student representatives were elected to the committee.

The P.I.E. project had successfully stimulated the change process since it demonstrated a different approach to learning and it was meeting the needs of a segment of the school's population. It opened people to the idea that it might be possible to offer other alternative learning environments to students within the same building. P.I.E., then, was "the forerunner of the E.B.C. concept."

An immediate concern of the committee was the involvement not only of the students but also the community in the development of the program. This led to the establishment of a 23-member citizens' advisory group. The committee held periodic meetings with the citizens' advisory group in an effort to provide them with information and to receive their recommendations concerning the planning process.

Many meetings were held during the second semester on non-school time to develop a tentative plan to begin the study of the E.B.C. concept. With the plan developed, the committee held an extensive planning workshop during July, 1972. The ultimate objective of this workshop was the development of a preliminary model of E.B.C. to be presented to the total faculty. To accomplish this, four goals were designated. These goals were:

1. To define various alternative schools
2. To define guidelines for the various alternative schools
3. To develop an overall framework as to how several alternative schools might function together within a building
4. To plan general faculty workshops to be held in August.

During August, one-week workshops were conducted by the committee and all faculty members were invited to attend on a voluntary basis. The purpose of these workshops was to provide other teachers with information concerning the development of the E.B.C. model and to establish a climate in which each participating teacher could contribute to and become involved in the planning process. About 90 percent of the eligible faculty participated.

One E.B.C. report (1976) stated:

> The direct involvement in the planning and problem-solving process, around which the workshops were centered, generated an enthusiastic response on the part of the faculty. Many sessions were devoted to the exploration of other alternatives, the clarification of previously developed models and the delineation of ideal learning situations. This involvement produced a sincere and deep commitment to the ideas presented and an attitude of challenge permeated the group.

While the development of the E.B.C. model progressed, it is necessary to note three historical events which had occurred previously but which now had consequences which had to be realistically considered when planning for the implementation of the model. One event was a referendum which was passed in 1969 allowing for the construction of a new secondary structure. The construction of the building was already underway. The referendum had resulted from overcrowded conditions in the existing schools and in the process of studying that situation, the recommendation was presented and approved that a 2-2-2 plan of organization for the district would replace the currently existing 3-3 system of a junior high consisting of grades 7, 8, and 9, and a senior high consisting of grades 10, 11, and 12. The third event which impacted on this situation was the need for an area vocational-technical center in the community. Since the new high school was still in the planning stage at this time, it was decided to attach the area vocational-technical center to the new senior high. This meant that grades 11 and 12 would be in the new building when it opened. These events affected the many practical decisions that had to be made in order to facilitate the implementation of the model.

The time finally came when it was necessary to discover which secondary faculties were willing to participate in the implementation of the newly developed program. A demonstration of commitment on the part of individual faculty members was to be reflected through a confidential vote involving all secondary teachers. The procedure for the vote though was carefully planned. The committee's work indicated that the program had to be implemented in a way that would be realistic when viewed by students, parents, and the community. This led to the conclusion that implementation could occur in only one of three ways, which were:

1. The program could encompass all three buildings, representing grades 7-12.
2. If the program were to be implemented in two of the three buildings, those buildings would be the junior high (9-10) and senior high (11-12).

3. If the program were to be implemented in any one building, this building would be the senior high (11-12).

This was the realistic voting plan that was used since it would allow for only a continuous educational procedure to result. This plan also reflected a concern for maintaining individual building identity. Much discussion among the staff indicated that a major concern was a reservation as to the ability of younger students to adapt to a program offering such extensive choices without first being tried with older, more mature students.

Since the new school would be opening the following year and the system would become a 2-2-2 system, the staff had been asked to indicate to which building they wanted to go, and the vote was counted by building identification. The voting result was that only the senior high, grades 11 and 12, would implement the new program. The staff involvement now narrowed to those only who would be associated with the senior high in September.

Some factors that facilitated the initiation of the change process and helped support it were: (1) several educators in the district had been given a leave of absence in order to pursue higher degrees. The result was that they were exposed to new ideas and were uneasy with the status quo when they returned from their studies. They wanted to utilize their new found concepts to improve the system. Each person returned to an administrative position in the district so they were able to provide leadership and support to the change process. (2) There were some persons within the system who were ripe for change, both personally and with regard to doing something different. These persons were creative individuals who were not security oriented, but growth oriented. Since they were desirous of personal growth and development they were willing to get involved with change and experimentation. They accepted the challenge once it was offered. They seemed to have felt honored that they were presented with the challenge whereby they could develop their own leadership qualities and abilities. (3) The final vote taken on E.B.C. involved an individual choice so those who didn't want to be involved in the change process had the option to transfer to another level of teaching. The faculty, then, at the senior high level were those who had made a personal commitment to be involved in the change process that the implementation of E.B.C. required.

School C

Table 3.3 gives the change time frame for the program in School C.

The historical situation that provided the opportunity for the initiation of the change process was the overcrowding of the schools in the district. A team of consultants was brought in to review the situation and to provide recommendations. A consolidation process was recommended with the district switching from an 8-4

TABLE 3.3

CHANGE TIME FRAME - SCHOOL C

Timeline	Event
1967	A team from the nearby University was brought in to review and advise the district concerning the consolidation process and recommended going from an 8-4 system to a 6-3-3 system.
February 15, 1967	A 4.2 million dollar bond issue was passed which allowed consolidation to proceed with the building of a new elementary school and a new high school. They went to a 6-3-3 system as the buildings were completed.
February 1968	A committee of educational consultants was formed through the help of an outside group. They met to define their role. They received background information on the school district prior to their meeting.
March 1968	The consultant committee made recommendations for change after interviewing the administration and selected teachers. The administration was selected as well as faculty cabinet positions.
April 1-6, 1968	Two consultants met with all the teachers in cabinet groups to introduce the idea of writing terminal objectives. Following the April meeting, the cabinet met weekly and one full Saturday in addition to meeting weekly with teachers. They began the task of writing terminal objectives.
May 14 1968	A consultant met with all the teachers in one-hour group meetings to answer questions and offer assistance in continuing the work on terminal objectives.
Memorial Day weekend 1968	Consultants met with the cabinet and the Assistant Superintendent in charge of Secondary Programs to assist in the development of the plan for implementation. They were introduced to a systems approach to planning (used PERT) and through the cabinet's involvement for a two and a half day period the long range plan was developed.

TABLE 3.3 (continued)

Timeline	Event
June 6 1968	A staff inservice day was held at which time the planned system was introduced to the total staff. The staff, divided into cabinet groups, was then actively involved in three areas: 1. How to clarify behavioral objectives. 2. Small group discussions regarding possible changes in teaching strategies which will be required for implementation of the eight period day program for this coming year. 3. Introduction to the system through participation in planning the events for the Operational Plan subsystem. The staff was invited to select a task force they would like to serve on and activation meetings were held. Established a goal of implementing individualized instruction by the fall of 1970.
July 1968	The new principal was appointed followed shortly thereafter by the appointment of four faculty cabinet members.
1968-69	The Northwest Regional Laboratory helped with the writing of performance objectives. The administrators and cabinet met once a month with both schools' staffs present.
1969-70	The administrators and cabinet met weekly with both schools' staffs present. The district released school for some time every Wednesday afternoon to allow the teachers to work on program planning. This is still a district policy.
Spring 1970	The staff for the new high school was identified.
Summer 1970	A one month paid workshop for the staff was conducted to develop learning packets, to experience sensitivity training and to develop humanistic skills to prepare them for their Guide role.

TABLE 3.3 (continued)

Timeline	Event
1970-71	The recently developed individualized program for students was implemented in the new building that opened this year.
1971-72	More structures were put into place.
1976	The school board budget failed the first election but passed the second. This caused the school board to have open meetings in the community to discuss community issues.
1977-78	The school obtained a computer to handle scheduling and reporting.
1978	The completion of the new auditorium and fine arts building that was built with Federal money. This building will also be used for community activities.

system of education to a 6-3-3 system. A bond issue was passed which allowed for the building of a new high school which was to be completed in 1970. This triggered the need for educational planning. The plan that developed grew out of concern for improving instruction and the need to plan a new secondary building to accommodate students' educational needs.

A definition of the problem as seen by the district is summarized in the preliminary conference report (1968) as follows:

> Theorists tell us that because of the knowledge explosion and the development of new technology, the students' and the teachers' roles must change. They also indicate that a great deal of knowledge

> concerning how students learn is ignored in present educational practice. We believe that if these changes are to occur in education they must be implemented with teachers who are currently in the field. We also believe that no marked change will occur unless the teacher has the support necessary to accomplish this change. Supportive factors must include an understanding of what research says about how students learn and the development of a teaching strategy and curricular vehicle compatible with new learning theory.

The administrators made it clear to the staff from the start that whatever change would take place would be done with the existing staff members and that no person's job would be in jeopardy because of any changes that were made. They would be provided with the opportunity to be involved in the change process and given the necessary training to develop the needed skills and competencies to perform changing role expectations.

A committee of national consultants was formed with the help of a statewide administrator's group to work with the administrators and teachers throughout the planning and implementation phases to insure "the development of a program that would be second to none." The committee defined their role as:

1. To assist teachers in clarifying goals and objectives
2. To offer assistance in determining strategies and planning for the implementation of the program
3. To assist when requested in the implementation of the program
4. To provide continuous evaluation of the program.

After interviewing the administrators and selected teachers in an effort to determine readiness for change and a starting point, the consultants recommended that:

1. The administrators for the new program be appointed
2. The district involved all teachers in writing a revised philosophy of education
3. The teacher planning committee (faculty cabinet) be appointed
4. All secondary teachers be involved in writing terminal objectives for their various course areas.

The district implemented the committee's recommendations with the appointment of the administration of the new school in March of 1968. Following the appointment of the administration, applications were solicited for faculty cabinet positions. The cabinet positions filled prior to April were heads of humanities, vocational, math-science, and guidance.

A stepwise progression as related by the principal was the involvement of the administration and teachers in: the development of the philosophy of education for the district; defining the district philosophy in behavioral objectives as the philosophy applies to each teacher's area of preparation; the development of curricular materials, translating the objectives into meaningful learning experiences for each student; and the development of a system for school operation which would take into account such considerations as the staffing plan, scheduling the program, length of the school day, number of periods, school regulations, and other details.

From the start, the district established as its goal the implementation of a program of individualized instruction ready for the opening of the new high school in the fall of 1970. An in-service plan was developed which included visitations to other schools, acquainting staff with trends, development of an organizational plan for change, and provisions for assistance, when needed, to carry out the plan. To achieve this goal, they concluded that the design of the program should meet the needs of today's youth without regard to past educational practices; that if changes in teaching methodology are necessary, they must find ways to help our teachers make these changes; and that they must seek ways to involve all facets of the educational community in planning, including parents, students, teachers, and the community members.

A three-day planning session was held during the Memorial Day weekend with a steering committee of teachers and administrators with the consultant group. Through the use of a systems procedure, this group defined the system of individualized instruction as: "Individualization of instruction takes place if each student learns as he learns best and attains worthwhile goals that are relevant to both the student and society through a continuous set of learning experiences." They identified the components of the system which must be developed, described procedures for development of these components, and fixed time deadlines for completion and assigned responsibilities for completion. The major areas included curricular content, the development of individualized learning materials, staff development, teaching-learning strategies, staff utilization, student involvement, community involvement, the school schedule, the operational plan, and evaluation activities. Task forces were set up composed of teachers and administrators with students and community when appropriate.

A cabinet member relates,

> We studied current educational practices and had in-service sessions with theorists. Theorists suggested that the only way to improve our educational model was to seek ways to individualize instruction. However, few of them were able to tell us how to do it. In an effort to find some answers for ourselves, we began by analyzing our present practices in an effort to determine how they inhibit our ability to individualize. Results of these studies indicated five major areas which limit our opportunities to improve instruction. These include: 1. curricular content, 2. teaching methodology, 3. use of space, 4. schedule, and 5. pupil evaluation.

The committee's studies and subsequent development of an improved educational program were brought about through the help of consultants from the state department of education, plus some financial help and consultants from the statewide administrator's group, the state's region for curricular improvement, and Title III curricular projects.

There was also teacher involvement in writing educational specifications for the new building. Through this involvement it was realized that a close look needed to be taken at existing instructional practices and trends with the hope that early obsolescence of the building could be prevented. The committee also realized that there needed to be a buffer zone between the architect of the building who didn't know anything about education and the educators who didn't know about buildings. A plan was developed to obtain Title III money to send the architect, a teacher, and two administrators to go and see different types of school designs in operation. The result of these visits was that the Campus Plan, which was the originally designed plan, was not considered feasible for the type of individualized programs being planned. Attention was then focused on the open-space concept and the architect redesigned many of the plans to fit this type of concept. This delayed the opening of the new building about eight to ten months.

During the summer of 1970, a one-month paid workshop for the staff of the new high school was conducted to develop learning packets and to experience some sensitivity and humanistic training to prepare them for the guide role.

The culmination of all the planning for the new program came with the opening of the new school in September, 1970. At no time in this process was there any need to require an individual commitment from the staff to the change. The consolidation of the two high schools into one was a recognized fact but the tremendous involvement of all the staff from the very start of the change process in the development of the district philosophy provided a strong sense of identification with the plan that was developed. The planning of the program and its development took place over a two-year time period. It was done in an orderly manner using a systems approach with long- and short-range objectives and deadlines. The administrators and key teacher leadership positions were identified over a year in advance. They each made a three-year commitment to the leadership position and worked closely in the development of the plan.

School D

Table 3.4 gives the change time frame for the program in School D.

The historical fact of the need for a new high school in a growing community provided the starting point for the change process in this school. The new school had no traditions to be followed so in its development of the educational program it was at a zero starting point. The new principal was brought in from outside the state and seemed to have been picked because he was a man of vision. The district policy provided heavy support for local autonomy so they needed a person who could lead in developing a good program.

The new school building was designed to meet the school's philosophy of "providing a humanistic learning environment for kids." There seemed to be no preplanning by the district for the school's educational program. The program was developed by the first year's staff and the principal with input from the students. The first year the school consisted of 330 students with 16 staff

TABLE 3.4

CHANGE TIME FRAME - SCHOOL D

Timeline	Event
1975-76	The staff consisted of one principal plus 16 teachers and only 9th grade students. Each teacher had only four teaching periods and one period to work on curricular development and planning for the new school. Classes were held in a separate building at a middle school site. There was one paid orientation week with brainstorming sessions for all the staff.
1976-77	The second year had only grades nine and ten. This was the first year in the new facilities and they started the school year with an incomplete building. There was little staff orientation for the new members. They hired about one-half of the new staff from without the District. An assistant principal, one business manager, and a classified position were added to the administration.
1977-78	This was the third year of the program with grades nine, ten and eleven. The building was still being constructed and completed. (The auditorium was completed in December 1977.) The large open space building was being subdivided. There were three new assistant principals added this year. There was a three-day sharing workshop held for new teachers.
1978-79	This will be the first year with all four grades: nine through twelve. There will be the same number of administrators as last year.

members and the principal. The new facilities were not completed so the classes were held in a separate building located on a middle school site. The staff was hired from within the district and represented a "normal" cross section of teachers.

There was a high level of awareness on the part of the community that this new high school was to be something different. The fact that the school was located within a planned community made a difference relative to the community expectations.

The superintendent related that he believed, "Decentralized management can work, and I'm going to make it work. Every single child can learn if we just provide enough learning options for him. No child needs to fail."

The first year was an exciting year for those involved. It was somewhat of a "grace period to develop and create ideas. We had a small involved staff with daily planning and developing time. Communication was easier and the daily grind less hectic so more personal contact was possible." This atmosphere changed the next year with the addition of 400 more students and the doubling of the staff as well as moving into the new facilities which were not yet completed.

During the first orientation week for the new staff a lot of the time was spent developing the philosophy through "we agree" statements. A lot of brainstorming took place. The staff was asked, "If this school could be done any way, how should it be done?"

There were few restrictions. The time was available for them to think and examine "What are we really here for?" They were exposed to speakers and innovative schools. The staff had high expectations for themselves. One person commented, "Maybe too high, since their high expectations creates personal anxiety for themselves when they can't fulfill their own ideals." The program that was developed came out of the interaction of the staff, community, and the students.

The staff saw themselves as highly competent, highly professional, highly independent, and highly autonomous. The principal said, "They'll let you know what they think." He encouraged them to take risks and to experiment. The teacher-advisor concept came out of one of the original task forces that was set up to find better ways to report student progress to parents. It therefore came from the teachers as their idea and they were thus willing to develop the program and be a part of it. Other task forces were created to deal with other issues. The staff felt that in their development of the program they had a unique opportunity to do something about "things that they always knew were wrong in education."

The principal believed that a change agent needs to have the following qualities: "to have a clear idea of where we want to go, to have a process with the staff to get there, to make compromises along the way, to be supportive of staff who try, and to be a real gamesman." He sought to create an atmosphere where "it's OK to err." He would ask his staff, "If you make a decision, what is the worst thing that can happen?" He worked closely with his staff in developing the program.

In the beginning, they deliberately left out any department structure and had only program coordinators, but the staff wanted to have a department chairperson appointed to deal with the organizational work of the subject areas. Originally, the money that would have been paid to department chairpersons was used for staff development and for conducting staff and student retreats.

One respondent viewed the change process as aiming at the ideal. "The staff sometimes say that they believe in something but don't really know the realistic cost. Therefore, in the implementation process there is always some retrenchment but you will never go back to where you were before." The change process is one of "stretching-relaxing-stretching again." The staff were continually encouraged "to think outside the box."

In order to obtain more financial resources to aid in the development of their program, a proposal was written for Title III funding. This proposal was written with such haste that it didn't have a specific enough focus so that the spectrum of the proposal was very broad. Although it brought some funding, it served to scatter the energies of the staff when they could ill afford it. Not much was said about the proposal that was submitted.

The original staff members submitted their application to work in the school knowing that they were getting involved in a change process. There does not seem to have been a specific point other than the signing of the contract of individual commitment to the change. They were all actively involved in the development of the program so they had a great sense of ownership in it. In the change process they were an integral part of the decision-making process and the consensus mode was utilized for the decisions. The influx of a large number of new teachers the second and third year posed problems for their ownership of the program. The teachers had a lot of voice in what happened and were able to initiate particular changes that they saw as important. The key that persons saw as necessary for change was staff: administrators, teachers and aides.

School E

Table 3.5 gives the change time frame for the program in School E.

The initiation of change in School E went back to 1966 with the formation of a committee to conduct a planning study of the district's elementary and secondary school programs. The district received a grant under Title V to conduct this study. The committee worked with two outside consultants on the study. The consultants presented their report in January, 1967. The district then obtained funds from the Educational Facilities Laboratory for the purpose of designing an elementary school, a middle school, and a high school which would provide the facilities necessary to implement the recommendations made in the consultant's report.

TABLE 3.5

CHANGE TIME FRAME - SCHOOL E

Timeline	Event
Spring 1966	The Board of Education received a grant under Title V to conduct a planning study of its elementary and secondary school program. Local study committees were appointed to work with two consultants for the secondary schools. These reports were completed in July, 1966.
May 1967	A 202 page "Citizens Curriculum Committee Report to the Board of Education" was completed in which revisions in educational philosophy, curricular guides, testing and grading practices, library operations, reading programs, honors courses and scheduling of secondary school students were recommended.
April 1968	A high school Planning Committee of 17 members worked to produce the written report "Educational Specifications for the High School." This 75 page report was presented to the Board of Education at its February, 1969 meeting. Its activities were financed by the Educational Facilities Laboratory. The committee met weekly through November, 1968. It received consultants' recommendations and made on-site visits to various exemplary schools.
Summer 1968	The committee attended the 18th School Planning Conference at Stanford where the architecture of the new building based on an open school concept was designed.
September 1968	Funds were obtained from the Educational Facilities Laboratory for the purpose of designing a high school which would provide the facilities necessary to implement the recommendations of the consultant's report.
1969-1970	A project Planning Committee was formed and met regularly during this school year.

TABLE 3.5 (continued)

Timeline	Event
October 1969	The Board of Education stated in a resolution that "this high school has been designated by this board as the model high school for the district." Application for a Federal Grant for the establishment of a Model High School for the school year 1970-71 was rejected on a technicality.
December 1970	The principal was hired. The Board of Education obtained a two year grant from Educational Facilities Laboratory to fund the pre-planning activities, the consultants' workshop, and curricular development during the 1st year of operation.
February 1971	The pre-planning staff was hired. (Vice principal, media center director, special assistant, department chairpersons: social studies, science, math, and language arts).
April 1971	The school was admitted into the NASSP Model School Project.
July-August 1971	All staff were hired by July 1st and participated in a six week training program which also involved students (concerning advisory and scheduling) and parents (public relations with the community and advisory program).
September 1971	The new school opened with grades 8-9-10 and 11 (50%). They had the 8th grade because a middle school was overcrowded. They had only 50% of the 11th grade because they choose to come and the building wasn't completed so it couldn't handle all of them. The building wasn't completed for the beginning of the year so the scheduling had to be different than was originally planned.

TABLE 3.5 (continued)

Timeline	Event
1973-74	Three guidance and counseling clusters were developed, assigning one third of the students to each of the three counselors. The professional counselors worked closely with their cluster advisors.
1975-76	Self-evaluation process for the Middle States accreditation was conducted. A new approach to discipline was officially begun based on Glasser's methods.

A Title III grant was obtained by the board of education for the establishment of a model elementary school. Another Title III grant was made to the board for the establishment of a model middle school. Although a third Title III proposal was submitted to obtain funds for the establishment of a model high school, the proposal was rejected on a technicality. This led to the necessity of seeking funds from another source. Fortunately the board of education was able to obtain a two-year grant from the Educational Facilities Laboratory to fund the preplanning activities, the consultants' workshops, and curricular development during the first year of the school's operation.

At their October meeting in 1969 the Board of Education stated in a resolution:

> It is the intention of this board to open and operate a high school beginning in September, 1971 and that this high school has been designed by this board as the model high school for the district. It will be characterized not only by its innovative design, but by educational methods and techniques responsive to the individual and societal needs of its students.

A project planning committee composed of eight educators from the state department of education, the central office, and the local university was formed and met regularly to prepare the Title III proposal, supervise the pre-operations of the model high school, monitor the establishment and operation of the model high school, and plan for and assist in the diffusion and dissemination of the model high school methods, organization and procedures.

The planning for the model high school utilized the successful procedures that had been followed in planning for the model elementary and middle schools in the district. This planned process for change consisted of the following eight steps:

1. Securing of federal and state department of education personnel to serve on the planning committee
2. Forming sub-committees to prepare appropriate sections of the proposal, utilizing the professional competencies of the committee members to the greatest advantage
3. Securing knowledgeable consultants who are able to stimulate the committee members in conceptualizing and making operational a model high school
4. Bringing into the planning operation principals and teachers who have special competencies needed in the project development
5. Utilizing the services of supervisors who are capable of contributing to the project

6. Preparing an adequate and realistic budget for the three-phase operation (three years) of the Title III proposal
7. Visiting exemplary schools and conferring with personnel therein
8. Monitoring the several phases of the model high school operation as they occur.

During all phases of the change process there was a concerted effort to involve educators at the state, district, and local levels as well as key educators from the nearby universities. There was a beneficial collaborative effort throughout the process.

In the development of the district's model schools program, the pre-staffing of the elementary and middle schools with emergent teacher-leaders constituted a keystone of the projects. So, drawing on these successful experiences the same route was followed in the pre-operations of the model high school. This route included the following steps:

1. Employment of the principal one year in advance of the opening of the school. (This was done in December, 1970.)
2. Employment of key leadership personnel one semester in advance of opening. (The vice-principal, media center director, special assistant, department chairpersons of social studies, science, math, and language arts were hired in February, 1971.)
3. Development of innovative methods and curricula for use in the model.
4. Visitations by pre-staffed personnel to model or exemplary high schools.
5. Utilization of consultants to work with model school personnel in preparation for the school's opening.

6. Operation of a pre-opening summer session for high school students involving all model high school personnel.

The planning committee was very interested in obtaining a first-rate principal for the new high school. The assistant superintendent related that they conducted a nationwide search for the best principal they could find. They were looking for someone who would be interested in doing something in secondary education and had the background to do it. They invited ten principals who had been identified nationally to come and work with the planning committee as consultants, "This way we were able to observe them in action and then use this experience as part of the job interview process."

The committee wanted a principal who could provide dynamic leadership for the staff in translating the concepts upon which the school was based into reality. They saw the following as desirable characteristics of the principal:

a. A philosophical commitment to an evolving and emergent high school program based on behavioral objectives;

b. Leadership ability in securing staff consensus and action;

c. Personal and professional flexibility which enables the principal to foster successful innovation and educational change in the school;

d. Ability to inaugurate community contacts so that a public relations program involving the school and the community may be initiated and developed.

As is obvious, much planning was done before the principal or the staff ever got on board. A central office respondent stated, "The change was done from the top down and it was well planned. It worked this way because it's right. We got across our ideas to the public and the school board." When the principal arrived on the scene the building had already been planned but he was given the freedom and support to do anything desirable concerning the development of the educational program.

When the key leadership people arrived in February they worked closely with the principal, the central office staff, and the state department of education staff to set a direction for the model school. Numerous meetings were held throughout the next five months with the goal of producing a general philosophy statement and a specific direction for each area of the curriculum. The total staff developed the philosophy and then presented it to the whole committee who modified it. The final statement then gave direction for all the sub-teams that were formed.

The principal recalled,

> All the time we were writing this document and meeting with the state department and local supervisors, three other activities were going on. (1) we were traveling to various places in the country to look at programs and at how to use buildings, etc., (2) we interviewed and made recommendations for the employment of staff for the coming year, and (3) we ordered materials and equipment that would support the kind of program that was being planned.

As the prestaff members developed a written document which would represent the thinking of all the parties and become the source for the planning sessions with the new staff, they realized that a good deal of what they had developed was incorporated in the NASSP model school project. One teacher said, "There was a great deal of compatibility between our thoughts and the thoughts of the model school. We used the document we had developed and the Model School Project materials to develop our six weeks summer training program for the faculty and staff." This training program involved specific directions in preparing learning packages, the handling of the teacher-advisor role, new approaches to evaluating and reporting, scheduling options and human relations.

The necessary steps had been taken to affiliate the school with the NASSP Model School Project. The new high school was not just a model for the district but now was also a model school in the NASSP Model School Project. The school attempted to implement all components of the NASSP model from the start. In preparation for the continuous progress characteristic of the model which was related to performance criteria, an exemption from the Carnegie unit definition of credit was sought. A letter was written to the state superintendent of schools requesting that the school be permitted to replace the traditional time requirement for granting Carnegie units of credit with a system for granting credit based on the demonstrated mastery of instructional objectives. An affirmative response was received. The aspect of the model concerning the use of paraprofessional help as opposed to strictly professional staff required that a letter be sent to the board of education asking permission for the hiring of paraprofessionals in lieu of teachers when appropriate. This request was honored. The principal reflected, ". . . the fact that we worked with the department of education at the state level so closely I think aided us in getting approval for a waiver from the strict reliance on hours as a means for computing current teacher unit."

In September, 1971, the new school commenced with the occupants moving into an incomplete building. The implementation of the programs began in earnest as the change process continued.

Some factors that should be noted about the initiation of this change process are: (1) the orderliness of the plan which was based on the previous experiences of the start-up process for the district's model elementary and middle schools; (2) the involvement of all the educational levels from the start and also beneficial outcomes from such collaboration; (3) the amount of time allowed for the start-up planning of the new school, (4) the prestaff planning time allowed, and (5) the six week planned training program for the whole new staff before the opening of the school. Once again, there was no need for an individual commitment to be made in the initiation of the change because the original prestaff members all were integrally involved in the development of the school's philosophy that was used as the basis for the hiring of the new staff as well as their six week training program.

School F

Table 3.6 gives the change time frame for the program in School F.

TABLE 3.6

CHANGE TIME FRAME - SCHOOL F

Timeline	Event
1965-66	New teaching concepts were being tried in one elementary school.
1966-67	The district administration took a hard look at student needs with a districtwide assessment and exploration. The district changed school boundaries.
Summer 1967	The high school language arts department representatives met to plan for a language arts curricular development.
1967-68	An edict was given by the Superintendent for a districtwide commitment to an individualized education program.
Summer 1968	Consultants were brought into the district for ideas but they lacked implementation knowledge. Teachers were selected to write the language arts curricular guide.
1968-69	The NASSP Model School Project (MSP) was applied for and received approval from the Danforth Foundation. The language arts curriculum was developed on a districtwide K-12 basis.
August 1969	A six-week MSP workshop was held for the staff with outside funding from MSP.
1969-70	This was the 1st year in the MSP with a five-year commitment to the program. The school followed all the objectives of the model. A K-12 curricular guide was being developed for the district and it took three years to develop all the initial curricular guides for each area.
1970-71	The new addition to the school was built with a lot of open space.

TABLE 3.6 (continued)

Timeline	Event
Summer 1971	A writing workshop was held to learn how to write learning packets.
Summer 1973	Committees were formed for curricular writing in all areas.
1973-74	This was the last year of MSP.
1974-75	The Learning Environments Consortium (LEC) was formed.
Summer 1975	The curricular packets were revised by representatives from each high school with a common editor for the packets.
1977	Dividers were added in the open-space area.

The seed for the initiation of the change process at the secondary level seemed to have been planted when an elementary school began to explore new teaching concepts, one of which was team teaching. One respondent indicated that these experiences eventually led to non-graded concepts in elementary and middle schools.

As a result of what was happening at the elementary level, the district administration decided to take a look at all the students' needs with a districtwide assessment program. From this assessment the superintendent recognized, "What we were doing was not good enough. We couldn't just do better what we had done, but we needed a totally new look."

The district then began to focus on the development of subject curricular guides. The high school language arts department included a group of teachers who were willing to participate during the summer in the development of a language arts curricular guide for the secondary schools. A year later this was developed into a K-12 language arts curricular guide for the district.

The superintendent related that he finally realized that if real change was to come about in the educational program of the district it was necessary to make everyone aware that this was what it was going to be. He asked: "When is somebody going to take the bull by the horns and do something?" Then he knew that only he could do that so he issued something like an edict to the district personnel, "Our commitment is for an individualized districtwide program. Either you take full membership in this game, and this is the only game we'll play, or look elsewhere for a job." There were some who did look elsewhere but most stayed for whatever reasons. The superintendent was willing to put his head on the block in order to indicate that change was necessary and to give the direction for that change.

The leadership from the superintendent and the central office helped to make the change process in the district orderly and progressive. The edict seemed to change teacher attitudes and they had to make their own decision of whether or not to play the game.

During the summer of 1968, consultants were brought into the district to work with teachers on curricular development and to expose them to the new ideas. The district's experience seemed to be that although the consultants provided a lot of ideas, they were very short on how these ideas might be implemented in the school.

The district set up various committees to work on the development of curricular guides for each of the subject areas. They wanted a curriculum which would cut the overlapping material, would provide for continuous progress K-12, and be able to meet the needs of the student where he or she was at in terms of his or her skills.

The district's basic strategy for change was to "get the classroom teacher involved in the decision-making process through committees." The process for the development of the curricular guides was always to have teacher input with a continued process of revising materials based on feedback from students and teachers as well as changes in student needs. Consultants were brought in to work with the teachers when this was necessary and desirable but "there was always teacher participation throughout. The result was that there was real teacher ownership in the curricular guides that were developed. The teachers took pride in their development and made sure of their implementation."

The secondary teachers were involved in the districtwide development of curricular guides for a continuous progress program of individualized instruction. In the exploration of ideas for implementing individualized instruction there were a lot of committees set up to perform certain tasks. The faculty took a vote concerning whether they wanted to join the MSP, but they felt the decision had already been made, so they voted to give it a try. The teachers were looking at ways that would facilitate the implementation of this type of program in the high school. Some of the central educational concepts they considered for the change were: (1) understand what continuous progress is; (2) understand discipline in terms of acceptable levels of movement, noise, etc.; and (3) understand the importance of the individuality of kids and their needs. As they searched for means to implement fully this type of program, they looked closely at the NASSP Model School Project (MSP) which they found incorporated many of the ideas that concerned them.

The school decided to apply for membership in the MSP because it provided some structure, direction, and was compatible with the school's philosophy. It had a plan for an administrative organization with a well prepared format. By being members of the project they would also have help and assistance from the other schools who were in the project. They were accepted into the project, and a six-week MSP workshop was held for the staff in August, 1969, with funding from the Model School Project.

It was in September, 1969, that the high school entered into an across-the-board change process as they implemented the components of the MSP which required some substantial changes in their administrative structure and in the expectations for teachers. As the teachers searched for new ways to do things they were supported by an administration that was "willing to allow mistakes. They allowed you to go ahead and try something if you thought it would work." The program mandated a great deal of inservice training which was provided during the year.

The change process was initiated in this school with the strong edict from the superintendent. It was helped to progress through the districtwide development of curriculum for continuous progress and the adoption of the Model School Project plan.

Summary

In looking over the six schools that were visited, one can note certain similarities and also differences concerning how the change was initiated in each school. Some observations worth consideration include:

1. Historical conditions provided the opportunity for this type of total change process to occur in four of the schools. The two main historical situations were consolidation and expanding enrollments.
2. In all six schools the change process was initiated internally, i.e., within the school district. In three of the schools the initiation began at the district level but the other three schools had district support for the change process.
3. Even though the initiation for change might have been at the district level, the principal was the key implementor in five of the schools. In the sixth school the assistant

principal for curriculum was crucial since the principal was rather neutral at the start.

4. Only three of the schools had a specific commitment phase required of the staff. Of these, only one school had an effective commitment process for the staff. The other three schools started the change process with the total group developing their philosophy statement which brought about the staff's commitment to the change.
5. In only one case was a new building specifically designed to meet the needs of the educational program. In four of the five buildings that were constructed there was utilization of the open space concept in some part of the construction of the building. The building that didn't have it was historically the first one built.
6. In two of the schools the principal was brought in from outside the district and also from out of the state. In both of these cases the change had initiated at the district level. The others were from within the district.
7. The lead time allowed for the planning and preparation of the change process varied considerably with correspondingly different results. When the planning began at least a year ahead of the implementation of the concepts with time for some development of the program

itself and also for staff development, then the change process was orderly and had a sound base of operation to continue a forward motion.

8. In three of the schools, change worked from the top down. Even so, the district allowed for decentralization of the decision-making process and also provided support throughout the change process.
9. All six schools sought outside funding to help support the staff development needs and the curricular development needs. Half of the schools obtained Title III funds and the other half obtained funds from private sources.
10. Three of the schools used outside models to help provide an organizational framework for the change process. One used the IGE model and the other two the MSP model. The other three schools developed their own organizational structures for the change process.

Persons Responsible for the Change

Table 3.7 presents the role positions in each school that were identified by respondents as being filled by key persons responsible for the change. The persons that were identified were those who were involved at least in the initial three years of the change process. The table does not indicate whether the person who filled the position during this time was still holding that

TABLE 3.7

IDENTIFIED CHANGE AGENTS IN THE SCHOOLS

	School					
	A	B	C	D	E	F
Superintendent	X	X		X	X	X
Assistant Superintendent						
a. for Curriculum and Instruction	X	X				X
b. for the Secondary Program			X			
Principal	X	X	X	X	X	
Assistant Principal for Curriculum and Instruction		X	X			X
Title III Program Director	X	X				
Area Coordinators			X			
Team Leaders					X	
Department Chairpersons						X
Identified Teacher	X	X		X	X	
Identified Counselor				X		
An Outside Consultant	X					
A Secretary			X			

same position at the time of the study. In some cases the person mentioned is no longer in the school or the district. A brief discussion is given concerning each of the role positions listed.

Superintendents were described as visionaries who had a lot of ownership in the program, persons who controlled the school board and sold the idea to them, supportive although taking a back seat to change, led the program through its implementation, forceful, and committed to individualized education. The superintendents were seen as dealing with the school board and directly with the community. They were viewed as supportive of the program, but they allowed the local administrators the autonomy to implement the program within their schools.

Assistant superintendents seemed to be active in following the implementation of the program, staying in the background and not interfering with things at the local level. The respondents described them as: idea persons, supportive of change and of the local administrators, not involved directly with the implementation but kept knowledgeable about what was happening, providing clout when necessary with the school board and the central office, having the ability to motivate people and to help them implement the change in a quiet and nonthreatening manner.

Regarding the principals, two of the schools had had a change in the principal by the time the researcher went to the school. One school had the change within the last two years, and the original principal had been a key initiator of the change within that school. He was the only person who had been identified almost unanimously as a charismatic leader. In that school many of the staff had gotten involved in the change because they trusted him, and therefore when he left a lot of things that had been under the surface emerged. The new principal was confronted with quite a challenge.

The other change in the principalship came early in the change process. The original principal did not initiate the change process. Although he was willing to support it, he did not get actively involved. He took an early retirement shortly after the change began, and this allowed a person who was a leader in the change process to become principal. This situation worked in a positive way for this change process.

The other principals were all present with the change process from the start. Some descriptive phrases for them were: an instructional leader, supportive of those who are attempting to change; good ability to work with people and groups; able to make trade-offs when necessary; visionary, flexible, and open; trusts other people's judgment; able to work with his staff in implementing ideas; committed to the program; believes in a consensus mode of operation; and has fine human relations skills.

Assistant principals for curriculum and instruction held important positions during the first couple of years of the change process when the curriculum for continuous progress was being developed. Two of the three schools no longer had this position, whereas in the third it was still a strong and viable position although this person was the third one to hold the position since the change started. She was described as a good implementor, personable, supportive, and encouraged others to try things differently. The others who held this position in this particular school moved upward to principal or assistant superintendent which provided very supportive persons in key role positions for the change process. Another assistant principal who had worked in the initial stages of the change process in developing concepts and writing materials chose to stay with the junior high school when the change process focused only on the senior high school. The final assistant principal mentioned was with the change process for five years and was instrumental in the development of the curriculum for continuous progress in the school. He was described as a good implementor but demanding and "hard-nosed"--directive, but helped people get the job done.

Title III program directors were important where they had their own offices and staffs. They held a role position with status. In one school this person was the same throughout the change process and he was described as a strong leader and a good implementor. The other school had three directors during the change process. The first person left at the end of the first year because she was pregnant. She was described as a good thinker and implementor. Her successor was a man who was well respected by the staff and worked well with people. His successor was a woman who was well organized and a strong leader. She was the director during the third and fourth years.

The roles of area coordinators, team leaders, and department chairpersons were important in the area of curricular development, and they provided leadership in implementing educational concepts. Their emergence indicated some decentralization of the decision-making process in these schools. These persons were considered to have been influential in making the change process work. Some descriptive phrases included: knowledgeable, practical, able to work with people, has a lot of common sense, listens, is open, and a good leader.

One respondent remarked, "It's the teachers who had to do the work and make the program go!" To this extent all of the teachers were recognized. It should also be noted, however, that the persons who held the role of area coordinator, team leader, or department chairperson also were teachers. When a specific teacher was mentioned it was for one of the following reasons: a perceptive person who was very knowledgeable about the model being implemented, emerging as a leader in committees and doing a lot of the writing for the Federal grant proposals, strong supporter of the change and informally influential with the staff, and an excellent writer of curricular materials who was able to teach the staff how to develop learning packages.

The counselor identified was a person who was well respected by the staff. This person was bright, perceptive, realistic, and able to provide constructive criticism. The counselor was from within the system while the principal was from without, so this was seen as a stabilizing influence on the principal.

The outside consultant was mentioned because he worked with the staff for several years in initiating the change in one school.

The secretary was identified as important because she was the key designer of the process for scheduling which would allow for variable time rates in the school. This person stayed behind the scenes and wasn't involved in the other areas of development except insofar as the scheduling information impacted upon it. She went to school to learn about computer programming and became responsible for the development of the programs being utilized with the computer to provide daily student schedule information in the school.

Change Strategies Used

Change strategies are exceedingly difficult to map because of the complexity of the interactions involved. In dealing with open systems, such as schools, one is faced with intricate, interwoven patterns composed of diverse personal and institutional goals and needs. The strategies planned for a dynamic system are not always clear cut nor stable since they are an integral part of a vibrant system.

How, then, does one isolate and discuss the change strategies? Clearly, it was impossible adequately to observe them in action. Respondents related them not always within a describable context, but rather within the change process as they perceived it had evolved. Motivations for the strategies were seldom identified and many specifics were not described. It is much easier to talk about the outcomes of the strategies and ignore the process. Even so, the outcomes may indicate whether a strategy was effective or not.

The four categories of strategies used as a backdrop for this section include those by Zaltman (1972), which are: (1) power strategies, (2) persuasive strategies, (3) re-educative strategies, and (4) facilitative strategies. These four types of strategies can be mutually reinforcing, rather than exclusive. This presents a difficulty in trying to discuss them. In this discussion there is no intent to imply that a given strategy cannot be related to more than one of the categories, depending upon the time sequence or the motivations of the planner.

Breaking change strategies into four categories is somewhat artificial since educational change depends on certain fundamental processes and always involves rewards and reprisals, communication, and configuring of the environment. The approaches differ, then, in the nature of the motivating forces and the specific types of activities emphasized. Since it was not possible to delve into the motivating forces for the change strategies which were related by respondents, the main cue to putting them into a category had to be the specific activities which were emphasized in the strategy. This was done, hence the activities are listed under the specific strategy categories at the end of this section.

To obtain a feel for the strategies used in some or all of the schools, the strategy itself will be discussed along with the positive and negative factors as they impacted on the change process. Then, each specific school will be discussed relative to pertinent positive and negative factors which impacted on the change process in that school.

The framework used in the discussion of topics across the schools is broken down into four areas: (1) resources (money, personnel, and time); (2) staff training (in curricular and the advisory systems); (3) organization (new structures and new buildings); and (4) climate (internally within the school and externally in the community).

Resources

Resources include money, personnel, and time.

Money. Funding was an immediate concern in all six schools. Four schools submitted proposals for Title III funds, and three of them were successful. The three schools not getting federal funds sought grants from the private sector. All of them obtained outside money to support the startup costs during the planning and staff development phases of the change process. The schools were not hesitant to seek federal funds for specific educational programs within the school, but this was not essential to the total change process.

A majority of the outside funds was utilized for the preparation of the staff and the development of curricular materials needed to support the individualized instructional program being developed. These funds were spent largely within the first two years of the change process. (Title III funds in the last two years were spent on validation and dissemination with little funds available to support the change process itself, and this was detrimental to the continuation of the change.) The obtaining of Title III funds presented serious difficulties regarding the change process. The major detrimental effect was that all three schools obtaining these funds were forced to accelerate their time frame for the change process to meet the deadlines. In one case, the proposal was written so broadly that unrealistic commitments were made and the school was "stuck" with them when the proposal was accepted. This put considerable pressure on the school to fulfill this large commitment. The private funds obtained did not have strings attached, so they were utilized by the administration in such a way as to maximize the progress of the change process.

Another aspect which resulted in some negative repercussions was that in two of the schools a separate Title III office with a full-time program director was created. This provided a new role within the school which had power and status and was perceived by the staff as functioning somewhat as a separate entity, but as having much influence over what took place. The third school, which did not have a separate program coordinator did not experience this negative reaction.

The other side of the coin is that the Title III and private funds allowed many things to happen which could not have been done without the money. All schools used their outside funds to sponsor the following types of activities: conducting summer workshops and paying the staff to attend; bringing in outside consultants; providing inservice programs throughout the year; sending administrators and staff to visit other schools; sending staff to conventions; hiring aides, clerical, and instructional assistants; obtaining materials for curricular development; and paying the staff for curricular development. These were all essential for the success of the change process.

Using this one activity, that of obtaining outside funds, and viewing it from the four strategy categories, one can get a feel for the interaction and complexity of any of the planned strategies. Going after outside funds was re-educative and rational strategy, but the utilization of these funds cut across all four categories. Power strategies are utilized through creating of a role position with authority, the use of economic power in being able to pay staff for attending programs outside of school time, and the use of peer pressure resulting from created staff interactions. Re-educative strategies are involved in presenting concepts, exposure to other schools, etc., which communicated facts about the change. Persuasive strategies were involved in the interaction opportunities provided through the training programs and the manipulation of rewards for those actively involved in the change. Facilitative strategies involved the ability to create materials needed for the instructional program, mutual staff support through task forces, and the like. All of these and other activities were outcomes involving the use of outside funds. The single activity of staff interaction could be put into any of the four strategy categories depending on the motivation involved in creating the interaction. This gives an indication of the complexity of adequately analyzing realistic change strategies. In the following sections no further attempt will be made to break out the activities into the specific strategy categories except in the presentation of Table 3.8 at the end of this section.

Personnel. The staff was obviously a crucial resource in the change process. Only one school had a free hand in selecting the staff for the new school. All of the others dealt with their existing or district staff members. One school gave their staff the option when the new building opened of being involved with the change in the new building or staying in the present program.

In all schools the participation of the teachers in the development of the program and in all aspects of the change was valued. Planned organizational structures were provided so that input was possible and there was genuine participation by the staff in the decision-making process.

As new staff positions opened, a screening process was developed whereby persons would be hired who understood the philosophy of the school and the expectations that would be made of them within the changing system. It was found that new staff conceptually might have understood what was expected but their implementation of the concepts sometimes posed difficulties--especially the fulfillment of the advisor role. No school had developed what they would consider to have been an adequate screening process for hiring new staff members.

All schools had difficulties with adequately providing for the training of teachers new to the system. One respondent commented, "New teachers don't own the program, they inherit it. How does one realistically pass on the torch?" As the inservice programs waned, those coming in new had to be socialized into the system through osmosis and informal interactions. This lack of a formal inservice program for new teachers was common and posed considerable difficulties--especially if staff turnover was high.

Time. Time was utilized in different ways to facilitate the change. How school time was used tended to emphasize what kinds of activities were valued. Five of the schools put time aside during the regular school day for advisor activities. Time also was set aside for diverse kinds of meetings, task forces, departments, administrative teams, curriculum, committees, etc. Time also was made available to develop curricular materials, although in no school was this time sufficient for what had to be done. In all schools the courses were broken down into smaller time segments, usually three-week or nine-week segments.

Time was a sparse commodity in all schools. One administrator stated, "Teaching, by itself, is a full-time job. There is just not enough time to do all the things that need to be done plus teaching a full load." A result of trying to do everything at once was the "burn out" syndrome. The interaction of all the elements was debilitating to the staff. Those schools which provided the most time for planning the change and developing the program before actual implementation had a more orderly and progressive change process.

Staff Training

Staff training was a vital part of each school's change process. The first phase was an exploratory one wherein staff members were exposed to new ideas by sending them to visit innovative schools to see what was working, bringing in consultants to present ideas, and attending workshops. An administrator commented, "If you pick the best places to send your staff for exposure, then those people will tell your staff what you would have told them; only they'll listen more to others, especially if they see it working."

After the expansion of a staff's horizons there was a phase wherein the staff became more deeply involved in the development of their own program. As this program developed, the more specific needs of the staff for new skills were identified. One area that was common to all six schools was that of curricular development. The other area in five of the schools was the new role of advisor or guide.

Curriculum. Development needs in curriculum required bringing in persons who could teach the staff how to write learning packets or unipaks and to help them understand the concepts involved in developing a continuous progress program; i.e., the development of a scope and sequence for all the courses.

In order to develop a continuous progress curriculum for all students it was necessary for the teachers to learn how to write course objectives, learning activities to reach these objectives, anticipated student outcomes, and procedures for evaluation. This not only involved restructuring the courses into smaller units but also learning the skills necessary to write the learning packets which would support this kind of individualized educational program. This required outside assistance and a lot of time to develop the materials.

Advising. Serving as an advisor or guide became an extension of the teacher's role in five of the schools. This was a new expectation for the teachers which required that they become trained to assume the responsibilities associated with this expectation. The advisor concept evolved from an effort to humanize the educational program and make an attempt to structure the environment so that teachers would know and understand each student as a total person. Several respondents related, "There is now at least one adult in our school who knows each student in a very personal manner and is available to assist that student in meeting his or her needs."

Teachers were trained to develop personalistic and human relations skills that they needed. They learned how to work with groups as well as with individuals. Another aspect that evolved was the need for the advisor to work closely in the academic advisement of each student and in the monitoring of their progress. This required additional skills in student record keeping and a thorough knowledge of the total curricular offerings. The advisor also became an important link in the home-school communication network.

The initiation of the teacher into an advisor role required a corresponding shift in the professional counselor's role in each school. Few schools dealt with this shift and since it involved only a few of the staff there were no formal inservice programs for the counselors to learn about their new and changing role expectations. Although a few were able to provide the leadership necessary to make the changes to meet their new demands, there still existed considerable lack of complementarity between the advising role of counselors and that of teachers.

Organizational Components

Organizational components were an important consideration in all of the schools. Three of the schools deliberately sought models which would provide some structure that would help them implement the concepts that they had developed. The two models used were those of the /I/D/E/A/ model and the MSP model. Two of the other three schools spent some time in developing their own organizational models and were able to function well with them in the change process. The sixth school didn't have the planning time to develop adequately their model, and the fact that in the implementation of their organizational model several variables were changing each year gave them difficulty.

Some common elements that were found in the organizational structures which supported certain change strategies were: decision-making structures which provided for staff involvement and a shared decision-making process, an advisor system which helped to make the school a more personable place and was also crucial in monitoring the continuous progress program, and a structure which allowed for an ongoing process of curricular development.

Two schools had a districtwide program for curricular development which was well structured and supportive of the schools' continuous progress programs. This made it possible to provide teacher input into curricular development and also to share in the concerted efforts of other teachers in the district. Such centralized programs provided strong support to the schools' implementation of their individualized instructional program. This type of planning benefited both the local school and the total district which developed a K-12 continuous progress curriculum for each subject. A third school was moving in this direction but its district had not yet articulated a well planned districtwide program. The other three schools were "going it alone."

In dealing with the change process, all schools experienced some difficulty with the implementation of their programs because of the fact that they started with too little structure for students. They failed adequately to define behavioral expectations for students when they changed the students' learning expectations. No school really provided a training program for the students as they had for the staff to help them adjust to the new expectations that were being made of them by the teachers. The advisor system provided the best structural support to help the students to make the adjustment. As the change progressed, the schools had to define behavioral objectives and means of holding the students accountable for what was expected of them.

The open-space concept was utilized in the building construction of four of the schools. In general, the staffs were ill prepared to use the open space for instructional purposes. The new environment did force teachers to re-examine their teaching styles and to develop new teaching strategies. The open space gave exposure of the staff to one another and provided for close interactive relationships among teachers. One teacher related, "We found it necessary to plan together for the use of the space and equipment. We became much more aware of how what we did affected the other teachers." Being visible also provided a certain amount of peer pressure since all staff members were able to observe what was done in student learning activities, grouping, and other behavioral patterns.

Open space did not always provide a pleasant learning environment. A common dilemma in every such school situation was how to deal with the noise level in the building. Another problem was how to subdivide the open space to be able to provide for different types of learning activities. In three of the schools with open space facilities dividers had been installed. In one case they were portable dividers which allowed for the further flexible use of the space, but in the others they were permanent. Even if teachers liked the open space concept, the acoustics were so poor that the noise level undoubtedly was draining on students and teachers alike.

In the situations where new buildings were created for the school, all of them were incomplete during the first year of the school's operation. This created difficulties in implementing the instructional program and siphoned energy away from the main thrust of the change process. This was a reality that the schools encountered and had to adjust to accordingly, but it did affect the startup phase of the change programs.

Organizational Climate

The climate of the school was an important element in each situation. It consisted of internal and external elements.

The internal climate. Within the school the administration under the leadership of the principal tried to create an atmosphere of trust, "where it was o.k. to take risks and try something different." Staffs were encouraged "to continue to search for what is better." The leaders were involved with the staff in the change process and were willing to take risks along with them. The administrators provided positive reinforcement to those who were expending time and energy to promote the change. The teachers also provided a supportive climate for each other through mutual involvement and encouragement.

Other factors that helped to provide a supportive internal climate for the change were: (1) good feedback from the kids which resulted from the advisor role, (2) the dedication and willingness of the staff to respond to what needed to be done, (3) social gatherings, (4) positive administrative responses to teacher needs, and (5) outsiders coming to visit and observe the program in operation.

The external climate. The external climate which impacted upon the change process included the community. The community pulse was difficult to read and not only varied from one subpublic to another, but even the same community would vacillate during the course of the change process, depending upon different factors. All schools found it difficult to get the community involved in the change process, although most of them made an earnest attempt to do so. One principal related, "Many changes seem to fail because of reactions from the community, so I try to anticipate reactions and plan ahead to avoid them."

The experience of the schools revealed that the citizens reacted negatively to fancy educational jargon with which they were not familiar and also to changes in the student reporting system which was different from the one which they themselves had earlier experienced. The advisor role, however, provided direct teacher contact with parents, and this helped to overcome some difficulties and to foster better communications between the school and parents.

One school created a Parent-Teacher Association the first year and made sure that influentials from the community were on it. Another school set up a community task force composed of local influentials. They used this committee to bounce off ideas from other task forces which had been created to develop the program and to check out the community reaction to any new ideas that were being proposed. This proved to have been a valuable mechanism. This community task force was phased out after the sixth year of the change process when school personnel thought that the concepts of quality and responsibility had been sufficiently developed in the school and accepted by the community. Two years after the task force was dissolved the Board's budget failed the first election but passed the second. This triggered another type of strategy for dealing with the community. This was to have open meetings at different locations in the community to air their complaints and also to answer any questions that they had about the school program.

From the open meetings the school found that they could do something about two areas of community concern. These were: (1) discipline and (2) the feeling that the curricular program had too many options and choices for the students who were not making responsible choices. The school developed a better set of student behavioral objectives and compromised on the curricular aspect by having the incoming sophomores start with a nine-week fixed curricular program which could be changed at the end of this period if the student demonstrated ability to handle responsibility. These minor changes improved community relations.

The schools found that it was important to keep a constant pulse on community concerns but that it was also difficult to reeducate the community to the changes that were taking place. In general, there was positive parental feedback from those who were actively involved in the change process or who worked closely with their child's advisor.

A brief overview will now be given for each school in order to relate some unique features of that school's experiences in their unfolding strategies for change.

School A

Staff development programs were generally optional in School A. They tried to use a lighthouse strategy with the inservice programs. The administration did not want to force persons to do anything that they didn't want to do. One person commented,

> It wasn't seen that everybody needs to know what is going on. The varying degrees of staff knowledge about the concepts presented difficulties in moving as a whole. If all are not fully informed then it is difficult for intelligent decision making to take place.

There was also a lack of stability in some leadership role positions in the new structure which created a lack of direction during the early stages of the change process. The stability of leadership resided in the department chairpersons who had no place in the new organizational arrangement. The clinical that was held involved only 20 percent of the staff, which proved to be inadequate. A respondent reflected that the clinical "should have been the training and commitment process for the change and therefore must require that there be 100 percent staff participation. It cannot be optional."

The strategy that the school used of taking a formal vote on a program that was not clear to the staff just to get something moving was not effective in the long run. The program got moving but not in a planned manner. There was, therefore, considerable confusion in the change process and with the concepts that were involved.

School B

This school went through two major stages in the change process. The first stage was the Project to Individualize Education (P.I.E.) program which was a small-scale forerunner of what was to follow. Two aspects of this program were the fact that the teachers volunteered to be a part of it and that they were actively involved in all the decisions that were made in developing the program.

The second stage was the Education by Choice (E.B.C.) program. The basic strategy that was used in developing this program was broad teacher involvement in the total process. The faculty voted to adopt the model developed, and only those who wanted to teach in that school went there. Within this model there were different alternative schools and the teacher could choose that school which best fit his or her own educational philosophy and teaching style.

School C

This school used a systems approach to planning the change process so they had short- and long-range goals. Each goal had a realistic timeline with a specified completion date which allowed for the orderly progression of the change program. Planning of the program started more than a year before its implementation. The staff in the key leadership positions made a three-year commitment to the change process and their leadership roles in it. This provided a strong continuity between planning and implementing change. It was very beneficial to have had this type of commitment.

During the first year of implementation, a group of feedback networks were set up to discover problems as soon as they arose. This enabled the staff to seek solutions while a problem was still small. This was effective.

The staff discovered after the first few months that their program was too open and too informal, so they established more structure for students. A task force was set up to help develop teaching strategies. The three basic strategies they proposed were: (1) every student is on an individual program without regard to others, (2) teach subgroups the goal according to the learning objectives, and (3) all of the students learn essential materials but one must also allow provision for differing rate by offering a parallel unit.

The school was created from consolidation, which caused some unique scars to which the school had to be sensitive. They involved the community in making choices regarding the new school--the name of the school, school colors, etc.--in order to help them get a feeling of ownership for the school. This strategy also helped to bring the people from different segments of the community working together and provided citizen support for the new school.

In the beginning, learning theory and research were used in curricular development, but the implementation process lacked sufficient supervision and structure which produced some negative effects, especially in the community. The school was short on district objectives at the start which caused slowness of accountability centered on course objectives. Time was needed to develop the necessary course objectives and accountability in terms of curricular scope, sequence, and teaching-learning activities.

School D

This school started with only one grade level served by a principal and a handful of teachers utilizing an unused section of an established middle school. The rapid growth of this school caused unique difficulties in the change process.

The first year was quite ideal; there was a warm atmosphere for developing the school's program. The emphasis of the strategy was on shared decision making. The basic pattern was to first look at what one believed about an issue, then see where everyone was coming from, and then reach agreement at a philosophical level. This cut off a lot of hidden agendas. They analyzed all possible options before adopting one; they sought to choose the best possible alternative; they looked at all the barriers and dealt with these in working out solutions. The principal stated, "People have to feel they've shaped the final outcome, therefore most outcomes are different from my original dream, but that's OK. There have to be trade-offs along the way." He saw compromise as an important strategy in developing ownership of the program.

During the second year, another grade level was added, the staff doubled, the administration increased, and they all moved into a new unfinished campus school. This rapid expansion without a well-developed plan for change resulted in the staff's energies being dissipated over many issues. Fortunately, the staff were young and energetic but even they couldn't keep up the pace. The "burn out" syndrome became understandably noticeable.

This school used the unit principal structure to provide for a personable and manageable system. The unit principal taught a class in order to be in contact with the students and to be sympathetic to staff needs. Some felt this to be a drain on their time and were not convinced that this was necessary.

The incomplete building hampered instruction and made for considerable staff frustrations. The many practical problems needing daily attention greatly distracted from any staff development program so new staff members were not able to reproduce the first year's development process.

During the third year, the school added another grade level and a corresponding number of staff. The principal finished hiring the total administrative staff so that no new administrators would have to be added the following year. The growth in the staff made inservice an important consideration, but the "growing pains" were still requiring immediate attention. With the rapid growth each year it was difficult to keep close communication and to develop supportive relationships. There was less staff involvement in decision making, hence there was need to develop more structures which will allow the staff participation. Structures were also needed in order to better focus the staff energies and to develop an orderly progression for the change.

School E

This school had been part of a well designed districtwide plan for educational change. The lead-in time for planning the program provided for an orderly change process. In the development of curricular materials the staff worked to: (1) set objectives, (2) develop materials to meet the objectives, and (3) procedures for evaluating performance. They found evaluation to be the most difficult and were still working at improving this process.

A strategy used with the staff was to let them experiment and then to evaluate to see if it worked. The principal reinforced the staff behavior focused on programmatic change. He said, "How you spend your time indicates your priorities." He thought that the evaluation of teachers and the inservice education of teachers was the principal's job. He used both of these quite effectively to move the staff to learn new ideas and to utilize what they had learned.

In School E the teacher working area was a large open-space room with all of the teachers' desks located there, so that every teacher would get to see one another during the course of the day. This atmosphere provided for excellent informal communication and teacher interaction.

The principal had sold the school board on a five-year implementation time frame which proved to be a realistic time period for systematic program implementation. Differentiated staffing was utilized effectively in maximizing staff time and abilities. Student teachers were used to free the staff to write curricular materials during the first two years.

Establishing close working relationships with the state department of education, local universities, and the central office was an important element of the change strategy utilized. This was effective in obtaining an exemption from the Carnegie unit and in support of the differentiated staffing arrangement.

School F

This district developed a strong districtwide curricular development plan. They provided for it in an orderly fashion and were willing to do this over a period of time. The district systematically replaced central office vacancies with persons who were supportive of the change and who had been actively involved in the change process at a lower level. This built continual support for the change process. There also was continuity of leadership.

The district used the following change strategy: (1) get one thing to "take off" and help make it happen, (2) capitalize on this good thing being done, (3) then spin off by getting others involved, and (4) finally, if the others don't follow, force the remainder so that all will do it. This is basically the lighthouse approach except for point four, the use of power to force people to change.

In planning the change, deadlines were set for the faculty to meet stated goals. Time frames were set for each goal. This facilitated a gradual and orderly process for the change. They took change a step at a time with the curriculum being the common thread.

Summary

In looking at the strategies in each of the schools one must be cognizant of where the school was with regard to the change process, as well as how a particular strategy fitted within that particular phase of the change process. Certain strategies were more effective in one particular phase of the change process than another. In most of the schools the staff seemed satisfied with complete involvement in the decision-making process during the initial development of the program, but once the implementation began they desired structures which would facilitate the change and free their energies to be used for more creative purposes. They were then content to have input to decision making but not be totally involved in the process. As certain features became routinized in the change process, the system's energy was able to be directed to other areas that needed further development. This sometimes necessitated the utilization of different strategies appropriate to the newly desired outcomes.

Table 3.8 lists activities in which the schools engaged during the change process according to the major strategy categories. A given activity is listed in only one strategy category although that same activity could come under another category, depending upon the motivation of the user. Activities were utilized for different strategic purposes depending upon where the school was within the change process. The strategy categories are: re-educative, persuasive, facilitative, and power.

The re-educative strategies are those which involved the communication of facts about the change. These activities consisted in conducting workshops, use of consultants, making courses available for credit, outside school visitations, newsletters, faculty meetings, setting up committees or task forces, conferences, and granting sabbaticals. These types of activities were more noticeable in the planning stage and in the first year of implementation than they were in subsequent stages of the change process.

The persuasive strategies involved manipulation of messages, rewards, or symbols to urge the acceptance of the change. These activities involved the interaction of a person within the system with other persons either within or without the system. The administrator was important, not only from the perspective of personally providing support, challenges, and encouragement to individuals,

TABLE 3.8

ACTIVITIES RELATED TO STRATEGIES ACROSS THE SCHOOLS

	School					
	A	B	C	D	E	F
I. RE-EDUCATIVE						
Conducted inservice programs	x	x	x	x	x	x
Use of consultants	x	x	x	x	x	x
Courses available with credit	x				x	
Outside school visitations	x	x	x	x	x	x
Principal's newsletter	x				x	
Regular faculty meetings	x	x	x	x	x	
Committee and/or task forces	x	x	x	x	x	x
Attendance at conferences	x	x	x	x	x	x
Persons on sabbatical	x	x				x
II. PERSUASIVE						
Teacher visibility in the open space area			x	x	x	x
Involved teachers were sent to give presentations at workshops, conferences, etc.	x	x	x	x	x	x
Visitation from outside people	x	x	x	x	x	x
Teachers were sent to conventions		x			x	x
Good test scores on national tests		x	x	x	x	
Positive community feedback				x	x	x
Assessment or evaluation process	x	x	x		x	x
Positive strokes from the administrators	x	x	x	x	x	x
Positive student feedback	x	x	x	x	x	x
Community involvement on committees	x	x	x	x	x	x
Trade off and compromise	x	x	x	x	x	x
Awarding credit based on achievement and not on time			x	x	x	x
Provided individuals a personal challenge to develop their potential	x	x	x	x	x	x
Gave involved persons recognition, promotions, and exposure	x	x	x	x	x	x

TABLE 3.8 (Continued)

	A	B	C	D	E	F
Involved staff conducted inservice programs in the school and the district		x	x	x		x
Mutual involvement in task forces	x	x	x	x	x	x
Lighthouse technique	x	x	x	x	x	x
III. FACILITATIVE						
Manipulation of time	x	x	x	x	x	x
Differentiated staffing			x	x	x	x
Staff chose consultants they needed	x			x		
Created testing centers			x			x
Staff involvement in the creation of the program	x	x	x	x	x	x
New facilities		x	x	x	x	x
Social gatherings		x	x	x	x	
Supportive climate of trust	x	x	x	x	x	x
A planned time frame with long- and short-range goals			x		x	x
Shared decision making	x	x	x	x	x	x
Good leadership	x	x	x	x	x	x
Placement of those returning from a sabbatical in key leadership positions	x	x				x
IV. POWER AUTHORITY						
A mandated state directive			x			
A mandated districtwide commitment to the philosophy of individualized education						x
The adoption of a single outside model	x				x	x
Districtwide curricular development	x				x	x
Overall district plan for change			x	x	x	
All teachers expected to do curricular development of materials			x	x	x	x
Minimum competency requirements			x	x	x	x

TABLE 3.8 (Continued)

	A	B	C	D	E	F
V. ECONOMIC						
Teachers paid for staff and curricular development with money, increment advancement on the salary scale, credits, etc.	x	x	x	x	x	x
Contract requirements	x	x	x	x	x	x
Released time		x	x		x	x

but also in presenting the opportunities to bring others into the system to observe what was happening and in rewarding those who were performing well. Teachers responded to being personally challenged; positive feedback from administrators, teachers, students, and the community; having the opportunity to demonstrate some of their accomplishments to others; and being praised for what they had done.

The facilitative strategies involved increasing the ease with which the change could be implemented. These activities dealt largely with the utilization of the resources that were available, as well as the influence on the formal and informal supports within the system. The leaders had to be continually alert to the changing needs of both the institution and the individuals to be able to respond appropriately to what needed to be done to facilitate the

the change process at a given point in time. These needs varied not only among different phases but also within a given phase.

The power strategies are those which involved the use of force. The two predominant forces used were those of authority and economics. Authority was effectively used from the district level as well as from the school's administrators. The district was important in providing a philosophical basis for the change, for developing an overall plan for change, and in creating a district-wide curricular development structure. The school's leadership positions were essential in implementing the concepts and ensuring that what had to be done was accomplished. The economic factors were needed in order to have the teachers involved outside of the school day, i.e., during the summer or weekends, and to compensate them for curricular development activities.

Things That Should Have Been Done Differently

This section deals with recommendations on a school-by-school basis which relate respondents' hindsight observations of things they would do differently based on their experience with the change process. Many of the major suggestions are direct quotes; others are rephrased.

School A

The following recommendations were made based on their change experience:

1. The inservice and the clinical experience should not have been optional. The clinical should have included 100 percent of the staff and been held during the summer when staff members were not distracted by other responsibilities.
2. I'd look more closely at planning how to bring about the change; i.e., time frame, stages, involvement, etc. We need one year of preparation and planning before making any commitment. The commitment should be a total one when it is made.
3. You cannot just let everybody "do their own thing." You need to have certain set parameters in which all will operate. This provides a sense of direction.
4. We should have kept the same community leaders to provide leadership continuity. Have a three-year commitment to such efforts.
5. The counselors should have been involved with developing the advisor program.
6. Don't implement one component at a time.
7. There is a need to fit the department structure into the model as a vital component.

School B

The following recommendations were made based on their change experience:

1. We found that we had two errors in our philosophy. We assumed that individual instruction was for everybody and that all teachers could function in the mode as we had developed it. Just as there were students with different learning styles, there were likewise different teaching styles.
2. We needed more structure in the beginning for the kids as well as more accountability for them.
3. There was a need to require some sequence in the elective choices.
4. You have to keep the community informed although it is difficult to get them involved. We should have had more public relations with the community, but I'm not sure what would really work. Everyone is an expert in education.
5. It would have helped to have had some form of ongoing evaluation of the program.

School C

The following recommendations were made based on their change experience:

1. Look carefully at the assumption, "if you give kids the opportunity to make decisions they'll make the right decision." They don't always do so. They can hurt themselves in the process; therefore, you need some built-in safeguards. You need some accountability measures for the students. You must have structure along with freedom.
2. We needed better public relations with the community. We shouldn't have used fancy educational jargon when dealing with the community. They didn't understand it and it wasn't necessary.
3. We didn't have enough control on the titles we gave to the new units that were developed and this had some bad effects on citizens who were concerned we weren't dealing with the fundamentals in our curriculum.
4. A pilot program would have helped.
5. Obtain the equipment necessary for the program so it's available when the program starts. It would have been nice to have had a computer from the start.
6. Individual instruction doesn't mean that a kid just does his own thing.
7. There is a need to look more carefully at the open space concept and its design, as well as how it can best be utilized.

8. We need to devise processes to have the teacher personally accountable for scheduling and curricular development.

School D

The following recommendations were made based on their change experience:

1. We "bit off" too much too soon--especially with moving into a new and incomplete building. We shouldn't have picked off so broad a program, but rather have a phase-in process. One can't move on all fronts simultaneously.
2. The staff is crucial, but don't know the answer of how to screen out who doesn't belong. We must find a way to match an individual's philosophy with the school's developed philosophy to see if they're compatible.
3. Ideally, we would have started with grades 9, 10, and 11 and all administrators and staff in place the first year.
4. You should plan long-range timelines with specific goals on a short-range basis. We needed to use time better.
5. I don't know why they didn't have department chairpersons in the first place. You need them for organization and curricular development. As a department, you need to decide in what direction the program's going. This takes lots of time.

6. We must do more with the public relations aspect. We should have a planned proactive program developed, and not a reactive one.

School E

The following recommendations were made based on their change experience:

1. The administrative staffing is too small. We need a building manager without an educational degree to handle finances.
2. We have to develop a better interview protocol for screening new teachers.
3. The school was way too flexible the first year. It needed more structure. The amount of time to be in class was up to the teacher and their department, but this left too much wasted time. Now, teachers and students are more accountable for time usage.
4. You need to provide for a block of time during the school hours for team planning, i.e., one hour per week. This time must be scheduled.
5. Utilize different criteria for hiring counselors. They should be resource persons for teachers and should be leaders in developing the advisor program and referral systems.

6. We needed preparation for teaching kids how to deal with open space, freedom of choice, and responsibility. Students needed more education in what we were about. We could have gone into flexible scheduling more slowly. It is better for a student to earn the right to have a flexible schedule than to be thrown in too soon and left to flounder.
7. Plan at least one year ahead for curricular development.
8. I wish it hadn't been called a "Model School Program" in the district because: it created barriers with other schools regarding implementation; there was a lack of understanding that the model meant a place to try, and not be the perfect plan; "THE SCHOOL" had a bad connotation since people associated the program with the school and didn't really look at the program itself and how it worked; people visited and took just parts of the program and wondered why it didn't work; and the "halo" created jealousy and some resentment.
9. I'd do things more systematically.
10. I've found that you need to take a look at the philosophy at the beginning of each year, talk about it, and clarify it for new teachers. There is nothing written in stone so it can be changed. If we all subscribe to the philosophy, then all should sign it each year. You can then

use this as the basis for all your decisions during the year. Then, hold the people accountable to what they agreed to be held accountable for. All the teaching objectives must support the philosophy.

11. We shouldn't have opened without computer assistance for record keeping.

School F

The following recommendations were made based on their change experience:

1. We should have had greater teacher preparation by having one year of teacher inservice training prior to the year of implementation.
2. We tried to prepare the curricular guides after we had entered the program. If we'd have done that first we'd have had a better chance at the start.
3. The public relations program should have been started earlier, stressing the positive. Have more community involvement by making them aware of what was being planned and why it was being done. We should have gotten community support prior to the change.
4. Provide for more released time for department chairpersons. You need them to help supervise the department and curricular development.

5. We need some way to provide for a more intensive ongoing inservice program for all the staff. Also, we must be more diligent with the inservice for new teachers.
6. We should have had more of an orientation program for the students so they'd understand the educational reorientation. Also, an orientation program for transfer students is needed.
7. When developing curriculum, concentrate on one learning mode at a time. You can't develop the expertise to do this all at one time. Free up good writers to write the packets. Don't require all teachers to write. I would spend less time on writing and rewriting materials and more time looking for different activities and materials to teach the same concept thereby providing more options to kids. You need flexibility and options for diverse activities, because not all students have the same needs, interests, preferences, and learning styles.
8. Some departments developed along different lines. It would have been better to have had a broad umbrella of school guidelines.
9. Schedule all teachers in a department to have the same planning time.
10. Total open space is not needed. You need different types of space for different groupings--quiet areas,

small group, large group, individual carrels, study areas, and social areas.

11. The professional counselor should provide the leadership for the teacher-advisor program and plan a program to assist the new teacher to be a teacher-advisor.

Positive Effects of the Change

All of the schools voiced similar positive outcomes from the change process which is related to individualizing education to meet the student's individual needs. One respondent observed, "It is easy to get wrapped up in solving problems that arise, but when you step back to see where we were and where we are now, we've 'come a long way, baby.'"

The positive outcomes related to teacher and student growth, the type of relationships now existing between teacher-teacher and teacher-student, curricular development, and school relationships with the community. The following are some of the most positive outcomes noted across the schools.

> Teachers and kids are more satisfied with the educational program.
>
> The staff is comfortable in questioning things, offering suggestions and ideas, or discussing. They are more open and less threatened by other staff. The door is always open for continual change.
>
> There has been tremendous personal growth and development on the part of all involved--staff and administrators. The change process helps me feel that I'm still growing.

> The advisor program resulted from the change. This has provided a more personal and positive climate in the school. Faculty-student interaction has increased through the advisor role where the faculty get to know the student better and can deal with them in a helpful manner. In the advisor role the teacher is not an authoritarian but rather becomes the kid's advocate. The teacher really cares about the kid, gives him or her positive reinforcement, and sees that their needs are met. The kids feel that adults care about them, and they get to know some adult as a person.
>
> The dropout rate has decreased. Kids enjoy school more. We've got the instructional program to meet the kid's needs. Breaking the curriculum into shorter units provided more options for students. Students who had previously failed now experience some success and blossom accordingly. The process is now flexible.
>
> Students are becoming more aware of their responsibility for learning. They have to learn to guide their own ship. They're provided a lot more freedom with responsibility. The system gives students more choices so they learn how to make choices and become comfortable with making decisions. They learn how to set goals and to meet them. It allows students to be more realistic in their thinking and in evaluating their own abilities in relation to meeting their goals.
>
> I've had my graduates come back and say how much better able they are as college freshmen to cope with living on their own and taking responsibility for their use of time than their peers.
>
> Kids are so neat! That's what makes it all worthwhile!

Although the schools were situated in different geographical locations and had differences regarding their experiences with the change process, one notes similarities in outcomes based on their experiences. Their experiences provide some insights into planning for effective change in secondary education.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS, AND IMPLICATIONS

This chapter consists of three sections. The first section presents a brief overview of the study. The second section gives a summary of the major findings and conclusions. The final section states some implications for practice and for further research.

Summary of the Study

This research study focused on the change process which was used to bring about individualized schooling in six comprehensive senior high schools. This study consisted of an intensive, in-depth analysis of semi-structured, open-ended interviews coupled with other field methodology techniques of observation and document analysis to identify and describe the key factors in the change process.

The conceptual and theoretical foundations of this study included IGE principles, systems theory, social systems theory, decision theory, change theory, and leadership theory. The IGE principles provided a philosophical basis for individualized schooling as well as a set of enabling objectives that were used to identify the selected schools.

Systems theory provided an overarching framework within which the school could be viewed. Social systems theory provided a more focused holistic perspective for dealing with the interplay between the individual and organizational dimensions in the school which was undergoing the change process. The complexity of the change process required that the transactional dimension, which is a blend of the personal and institutional dimensions, be a part of the analytical framework of the social system analyzed. Decision theory addressed the decision-making process which was an integral component of the change process.

Change theory provided an analytical framework within which to explore the change process. Four models of change were considered: (1) the problem-solving model, (2) the social interaction model, (3) the research-development-diffusion model, and (4) the linkage model. Within change theory, the concept of strategies was important for the analysis of the change process. Four strategy categories considered were: (1) power strategies, (2) persuasive strategies, (3) re-educative strategies, and (4) facilitative strategies. Leadership theory provided a way of describing leadership behavior. The three leadership styles delineated were nomothetic, idiographic, and transactional.

An intensive study was conducted in six selected comprehensive senior high schools located in various parts of the nation, with diverse socioeconomic levels and varying ethnic composition. Data collection procedures included interviews, observations, and content analyses of documents. Comparison studies by Daresh (1978) and Watkins (1978) were conducted simultaneously to investigate the interaction of extraorganizational and intraorganizational factors on the maintenance of the individualized program and the decision-making structures and processes in the individualized senior high schools. The collected data were coded according to the basic research questions. The data were summarized and analyzed in terms of five categories which reflected the research questions. These categories were: (1) how the change was initiated, (2) persons responsible for the change, (3) change strategies used with observations on those factors which helped to support and those which hindered the change, (4) things that should have been done differently, and (5) positive outcomes of the change. Some categories were analyzed school by school while others were across schools using school specific examples.

Findings and Conclusions

This section presents the major findings and conclusions that emerged from the study of the change process across the six selected senior high schools. The findings are listed numerically. Conclusions follow the numbered findings and are listed alphabetically.

1. The educational change process in all six schools required a dynamic instructional leader at the local administrative

level; typically, this was the principal, but in one case it was the assistant principal for instruction.

The leadership behavior demonstrated by administrators was leadership which encouraged risk taking on the part of the staff. The staff felt that it was acceptable to take risks and make mistakes as they stretched themselves in acquiring new skills and developing new instructional materials. The principal was crucial in creating an atmosphere of openness and trust within which the personnel could function.

2. Leadership at the district level and among the school board was either positively supportive of the change or at least neutral toward it.

3. Continuity in leadership roles in the school and the district during the first three years of the change process impacted upon the effectiveness of the program implemented. Where there was continuity there was better support and direction for the change.

A. Creative and supportive educational leadership behavior and continuity in leadership positions on the part of the administrators in the school and the district are essential to an effective educational change process.

4. Involvement and participation of the total staff during the initial stages of the change was valued and occurred in all of the schools.

This process was important in bringing about staff ownership of the programs and outcomes developed. The decision-making process normally involved a consensus mode and generally ensured that resulting decisions would be implemented. The school's philosophy was the first thing developed in the initial stage by four of the schools. Successful change required the total staff to be involved in the development of the school's philosophy which brought about the staff's commitment to it. This philosophy served as the foundation for subsequent decisions.

5. During the implementation phase of the change, continued total involvement in the decision-making process was not desirable.
6. All of the districts had a decentralized decision-making mode of operation which allowed the principal autonomy in implementing the change within the philosophical commitment and guidelines of the district policies.

B. Districts with a commitment to the educational philosophy of individualized schooling need to operate with a decentralized decision-making mode which allows for total staff involvement in shared decision making at the school during the initial stages of the change and diminishing involvement as the implementation progresses.

7. The initator of the change process in the schools was always an internal person, either at the school or district levels.

In four of the schools the change originated from the top with districtwide planning for the change. One of these schools received an edict from the superintendent which stated the district's commitment to individualized education.

8. Historical circumstances played an important role in providing the opportunity for planned change to occur in four of the schools; i.e., a school consolidation process, a planned community, or a new building.
9. In the districts where there was at least a year of planning for the change process the implementation was orderly and progressive.

The three cases where there was at least a year of planning involved districtwide planning for the change process. This type of planned change provided direction and support for the implementation of the change in the school. The implementation of the change program in all the schools took at least five years which should be considered a minimum time frame for a change of great magnitude.

10. Administrators and staff experienced a "burn out" phase within the change process which was less severe if the change was adequately planned so that concepts

and programs were phased into the school with realistic short-and-long-range timelines.

The change process was taking place on several fronts simultaneously; i.e., curricular development, new structures, changing role expectations, adapting to a new building, etc., in most of the schools so staff energies were unduly dissipated unless realistic short-range goals were set which helped funnel the staff's energies as well as provide them with positive feedback and a sense of accomplishment when they reached the goal.

C. Educational leaders can capitalize on historical circumstances to bring about a total change process. They must take the time, at least a year, to develop a planned change process involving realistic short-and long-range goals within a set time frame before beginning the implementation phase of the change. Strategies need to be identified to bring about the desired outcomes.

11. There was a need for all the schools to obtain initial outside funding sources in order to provide for staff exposure to new concepts, inservice training of the staff, the development of instructional materials, and for staff development activities during the summer or outside school time.

Three schools obtained Title III federal funds while the others received funds from private sources. The private funds had few strings attached but were available in smaller amounts and for only short periods of time. The federal funds had rigid deadlines and specific requirements. Schools that received federal funds were forced to meet the deadlines and in this process compressed their time frame which had a negative impact on the change process.

12. The planning grant was the most effective type of grant for supporting a total change process in the school.

13. The seeking of outside funds was preceeded in all the schools by their own desire to change.

14. The outside funds were effective in helping to initiate the change process and to support its implementation.

15. The creation of a separate office and a full-time coordinator for the federal program had negative repercussions on the staff.

16. The districts were willing and did continue to support the new needs of the system that developed through the change process but they were unable to provide funds for the continuation of the intensive staff development activities that the outside funds had earlier made possible.

D. A lump sum of money able to be utilized by the administrators in the most effective manner is needed, over the initial two-year period of the change process, for staff and curricular development activities which are necessary during the preplanning, planning, and changeover phases.

17. The schools sought or developed their own organizational models which they could use to facilitate the change process which provided a supportive structural framework.

Structures were needed to provide for the shared decision-making process, to create a more personable environment, and to provide for the curricular development and implementation of an individualized instructional program. There were strong staff feelings about their subject department identification. Two of the three schools that attempted to ignore or eliminate the subject departments found that they had to deal with the issue later in the change phase. The third school had stagnated in terms of individualized learning programs partly due to a lack of a departmental structure or some similar type of structure. The three schools that retained the departmental structure were able to utilize it in implementing an individualized instructional program.

18. Five schools had an advisor program as part of their new structure.

19. The advisor role expanded the role of the teacher and made new expectations on the teacher which required the learning of new skills.

20. The advisor program was effective in: (1) humanizing the school for both students and adults, (2) providing an effective means of monitoring the student's

individualized program, (3) creating more communication between the school and parents, and (4) giving positive feedback to teachers.

21. The advisor program was crucial to the implementation of a curriculum providing for a student's self-paced continuous progress.

E. Before implementing a change program a planned organizational model consisting of the following components is necessary: (1) a shared-decision making process; (2) creation of a more personable environment; (3) an advisor system which provides for individual student contact, monitoring of each student's educational program, and parental contact; and (4) the curricular development for an individualized instructional program.

22. Every school engaged in an intensive inservice program for the staff prior to and during the first year of the changeover phase with the majority concentrating on the areas of developing the concepts and skills necessary for the creation of an individualized instructional program, and learning the concepts and skills necessary for being and effective advisor.

Many of the inservice programs were held during the summer and on nonschool time. These programs involved: bringing in outside consultants; conceptual presentations; activities workshops; and sending persons, especially those in leadership positions or with leadership potential, to visit other schools to observe how concepts were being implemented.

23. Staff development was crucial to the success of the change.

24. Teachers were given incentives to participate in staff and curricular development in the form of: (1) extra pay, (2) released time with pay, and/or (3) increment advancement on the salary scale.

25. Staff development activities tended to diminish by the second year of the implementation phase with negative consequences.

26. Staff members grew personally and professionally through the inservice programs, as well as by the new demands made upon them to implement their commitment to students and their philosophy of individualized schooling.

27. Effective results required that all staff members participate in the staff development activities.

F. No effective change process can be undertaken without an intensive inservice program for the staff to expose them to the new concepts, to train them with the necessary skills to be able to implement the program and to fulfill the new expectations that will be made of them. Incentives must be provided for the staff in order to obtain total participation.

28. With the advent of the advisor system the counselor's role underwent a radical shift in the school. Counselors should take leadership in helping teachers develop human relations skills, giving them back-up support, and developing an effective advisor program.

29. Some of the counselors were not actively involved in the development of the advisor system and therefore had difficulty in relating to it.

30. No inservice program was provided for the counselors to help them understand their new role in the system.

G. Counselors need to be actively involved in the development of the school's advisor program to ensure that they will provide the necessary leadership for the continual development of the advisors and the program itself. They should be given some inservice training to prepare them for this role expectation.

31. Administrators found that developing a hiring process to obtain personnel who would be committed to the school's philosophy and capable of functioning within the new educational environment was extremely difficult. None were satisfied with their screening process. They discovered few teachers capable of adequately functioning within the new type of system unless applicants had undergone their teacher training program in the school.

H. A teacher screening process for new staff is needed to determine a person's philosophy of education and attitude toward students, as well as teaching competency within an individualized environment.

32. Teachers who joined the staff after the second year of the change process found it difficult to adapt to the teaching and advising demands of an individualized system and to identify with the instructional programs unless they became actively involved in helping to develop new ones or revising those that were there.

33. After an initial period of staff development the schools failed to develop adequate annual orientation and inservice programs for incoming teachers.

I. Teacher and counselor training programs in colleges and universities need to be revised in order to provide prospective teachers and counselors with the knowledge and skills necessary to fulfill the new expectations made of them in secondary schools which are individualizing instruction.

J. An annual inservice program for incoming teachers needs to be developed so that they will be able to identify with and acquire ownership in the instructional programs, to have some understanding of the historical change process, and to assist them in obtaining the skills necessary to function effectively.

34. None of the schools which had open space were adequately prepared to utilize it effectively in implementing the instructional program. The open space required different teaching strategies.

35. The construction of every open space building provided acoustical problems for those utilizing it.

36. Every open space building had eventually been divided by partitions, either permanent or moveable.

K. Building structures affect the implementation of a program and must be considered, especially when they involve such concepts as open space. Open space structures currently are not acoustically acceptable in secondary schools.

L. Teachers need to be trained to utilize the open space in their teaching style. Within an open space building one must be able to provide for the flexible use of space by the staff which will allow them to meet the diverse educational needs of the students.

37. Every school considered it important to involve the community in the change process and to keep them informed, but most found this ideal exceedingly difficult to accomplish.

38. The community reacted negatively to educational jargon which was foreign to their own educational experiences, as well as to changes in the student reporting system

unless adequate groundwork had been laid to help them understand the concepts involved.

39. All the schools began the implementation of the change with too little controls, structures, and procedures which resulted in negative repercussions in the community.

Generally the implementation of the program began with an atmosphere of experimentation and flexibility. Student behavioral objectives were not clearly defined, so students were not adequately held accountable for their actions. By the time the structures were put into place and the objectives defined, the damage had already been done in the community.

40. The community response to the change process was not consistent throughout the change phases but varied depending on many different variables; i.e., economy, educational climate, student behavior, political issues, and the like.

M. Ongoing communication and community involvement structures should be established before the implementation of change begins.

41. Three districts had a centralized K-12 curricular development program for a continuous progress curriculum, according to subject area which greatly supported the changeover to an individualized instructional program in the school.

N. A strong district commitment to the educational philosophy of individualized schooling and a centralized districtwide K-12 curricular development process according to subject area supported the school's implementation program.

42. All of the schools used identifiable change strategies, although some were not as well planned as others. None evaluated the effectiveness of their strategies as they progressed through the change process.

43. Few schools had an effective ongoing evaluation process for the different stages of the change process.

O. A definite evaluation process for each aspect of the change program should be developed in the planning stage and should be executed within the time frame of the prescribed objectives.

44. None of the schools provided a training program to assist the students in adapting to the new educational environment, their new role responsibilities for their learning, and the different expectations required of them. Students initially had difficulties in adjusting, but were better able to do so if an advisor program was functioning adequately.

45. Dropout rates decreased where courses were available that (1) were adapted to the student's level of success, (2) met the student's interests, and (3) provided for

different types of learning activities to meet the course objectives.

P. Student needs should be considered in the change process with a training program available to help them adjust to the new expectations teachers would be making of them and alternatives provided to meet different student learning modes.

46. All schools gave students credit on the basis of objectives accomplished and not on the amount of time spent in a course.

Q. The Carnegie unit of credit which is given on the basis of time spent is not relevant and should be abolished. Credit should be based on what is learned and the objectives accomplished, not on time spent.

47. None of the four models of change in this study was adequate to explain the total change process as it unfolded in the schools.

None of the models mentioned the "burn out" phase that was experienced in some schools. The models were generally concerned with external change agents, whereas these changes were initiated internally and the process was controlled internally. The description of the relationship between the user system and the outside agent utilized in the models was generally inconsistent with reality. These change processes were affected by: community pressures, the political nature of the educational system, the differing requirements of the various phases of the change process, the fact that the system is a people-oriented system, and that all of the outcomes of the system are not clearly measurable.

R. An eclectic change model needs to be developed which addresses the issues found in an internally oriented and controlled change process, exhibiting different levels and phases, within a dynamic, people-oriented system that is affected by the political process.

Implications for Practice and Research

This concluding section first contains implications for practice for those engaged in planning and implementing a major change in comprehensive senior high schools. Then, some suggestions are offered for further research regarding educational change.

Implications for Practice

The following practical recommendations for educators interested in initiating a change process to implement individualized schooling in a comprehensive senior high school result from this research study.

1. The principal should be an instructional leader who is able to provide a supportive climate of openness and trust so that the staff members will feel free to take risks and try things differently.

2. Key leadership positions should be identified at the beginning of the change process. The change agent should have the ability to recognize the individual staff member's leadership potential and be willing to challenge the person to grow through accepting a leadership role in the change process.

3. Structures should be set up in the beginning which will provide for involvement and participation in the decision-making process. Administrators need to be sensitive to the needs of the staff to determine what degree of participation they value as the change process unfolds.

4. Adequate time should be taken to plan the change process. Planning groups should be given at least a year to map out a time frame which would include short-range goals as well as the long-range ones. The plan should identify specific strategies that will be used in order to implement the change. Evaluation procedures should be related to specific planned objectives in the change process and utilized from the start within the time frame of the identified short-range goals.

5. Outside funds should be sought to support the exposure of the staff to new ideas and to provide for an adequate staff and curricular development program. Adequate proposals should be written to obtain the funds.

6. Federal procedures for obtaining funds for educational change should provide for flexibility within the time frame of the proposal; for granting a substantial sum of money during the first two years of the proposal involving the preplanning, planning and changeover phases for staff development, inservice curricular development, outside visits and utilization of consultants; and for guaranteeing continual financial support over at least a five-year period which would be based upon the meeting of defined objectives with declining amounts after the first two years. If the change is successful then the government should reward the system with some nominal amount of continual funding to support the inservice training of the staff.

7. Behavioral expectations for staff and students should be clearly defined before beginning the implementation of the change. Structures should be in place from the start which will be able to hold the students accountable for their use of time and fulfillment of the stated behavioral expectations. This will help create an atmosphere of purposeful behavior.

8. Administrators should be aware that the community can never be taken for granted. They should utilize structures and processes which provide for ongoing, two-way communication between the school and the community. Community input and involvement is important, especially in the initial stages of the change process.

9. The teacher role should be expanded to include that of advisor. The advisor role should be two dimensional. One dimension is the personal interaction between the adult and student while the other involves the monitoring of the student's individualized instructional program. The teacher advisor role makes new demands on the staff who need to be trained with the ncessary skills to fulfill this role.

10. The counselors should be involved in the development and maintenance of the advisor program. They should be responsible for the inservice training program for teachers who will serve as advisors.

11. Administrators should be aware that the needs of the staff vary during different phases of the change process. Their leadership style and the utilization of the structures should reflect these differences.

12. The school's philosophy should be re-examined at the beginning of each school year by the total staff in order to provide for a recommitment from each returning teacher, and as a means of involving the new teachers in ownership of the philosophy and obtaining their commitment to it.

13. Incoming teachers should be given inservice training concerning their new roles as teachers and advisors and the requirements involved within an individualized, continuous progress curriculum.

14. Colleges and universities involved in teacher and counselor training programs should examine carefully the concepts and skills that are needed to function within a continuous progress individualized instructional system with an advisor program. They then should evaluate their program to see if they are providing their students with the proper training.

15. A curriculum should be provided wherein students receive credit on the basis of objectives accomplished and not on the amount of time spent in a course. Steps should be taken to abolish or redefine the Carnegie unit.

16. Teachers should be actively involved in planning and implementing inservice programs so that these programs will address their needs and concerns.

17. Administrators should consider carefully the building requirements, the instructional needs, and the teacher expectations involved with the open space concept before they attempt to utilize it.

Implications for Research

This study had revealed several areas in which future research concerning educational change might prove beneficial. The following may be worthy of consideration.

1. There is a need to examine the process of diagnosing and prescribing educational change so that optional strategies for planning and achieving it can be devised.

2. Instruments need to be developed to be used for evaluating change strategies relative to projected outcomes in order to determine their effectiveness.

3. The relationship between leadership qualities of the change agent and the organizational arrangements for shared decision making need to be investigated as they relate to the initiation and implementation of the change process.

4. A longitudinal study of a planned educational change is needed to identify the different phases in the process, to investigate specific needs in each of the phases, to assess whether different types of strategies are more effective during different phases, to evaluate the strategies employed as they are utilized in terms of the objective that the strategy was intended to accomplish, to assess whether additional strategies were used to accomplish the objective, to identify the forces that impacted upon the change process and their effect on the planned change.

5. The relationship between the factors that influence educational change, the desired outcomes of the change, and the strategies chosen to bring about the change need to be researched.

6. The "burn out" phase involved in the educational change process needs to be researched to determine the factors that contribute to it, whether it is a predictable phase or can be avoided, what are the staff needs in this phase, and how it affects outcomes.

7. Research needs to be done on the utilization of open space and its effectiveness on teaching styles, instruction, the interaction between teachers, student responses, and staff and student satisfaction.

8. The advisor role was seen to be an important extension of the teacher's responsibility in the system which affected their relationship to students, their interaction with other staff members, and their contact with the community. The interdependence between the advising responsibilities of the teacher and these factors should be investigated as to the resultant effect on student achievement, teacher and student satisfaction and community support for education.

9. Research needs to be conducted on the development of theories of educational change which take into consideration the unique characteristics of the educational system; i.e., its political nature, the fact that it is people oriented, the change process is multidimensional, its dynamic nature, uncontrollable factors that impact upon it, and the lack of consensus on desired outcomes and how to measure them. Most of the current models of change have originated within an industrial context which does not

exhibit many of the characteristics of the school as a social system. Educational change also takes place over a long time span, this study indicates at least five years, during which time few factors remain constant. Such theory and research also need to deal with the internal change agent who, in this study at least, appears to initiate and control the change process.

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APPENDIX A

TELEPHONE SURVEY

TELEPHONE SURVEY

Name of School: ____________________ Phone: ______________

Location: (City) ____________________ (State) ______________

Person Contacted: ____________________ Position: ______________

Researcher: ____________________ Date: ______________

Communications:

1. Initial telephone contact on: ____________________
2. Cover letter and abstracts sent on: ____________________
3. Dates set for school visit: ____________________
4. Other contacts:

Name	Position	Date	Comments

5. Letter of thanks sent on: ____________________

Comments:

Telephone Interview Schedule

A. Introduce yourself as a project assistant from the Wisconsin Research and Development Center.

B. Refer to the mission of the Center and specifically of the unit Studies of Administration and Organization for Instruction.

The Center is currently engaged in a research and development project relating to individualized schooling in secondary schools. Three companion research studies are proposed:

1. Investigation of the change processes which have brought about programs of individualized schooling.
2. Investigation of the intra- and extraorganizational factors which relate to individualized schooling programs.
3. Investigation of the decision-making processes in senior high schools which are implementing such programs.

C. Mention that the school concerned has been recommended as one which is implementing a program of individualized schooling.

D. Ask if the present is a convenient time to pursue the matter. If not, establish a more appropriate time.

E. If it is convenient,

(1) Explain in more detail the proposed program of the Center (see Abstract);

(2) Seek permission to ask questions which would help compile an information file on the school and decide its suitability for further study.

F. Ask if the informant has any questions at this stage. If yes, respond.

G. Proceed to ask the following questions and note answers.

1. Background information.

   Name, address, telephone number.

   Staff: principals and assistants, total number of teachers, ethnic balance.

   Students: grades, enrollment, ethnic and sex balance.

2. Proceed through checklist which operationalizes the nine components adapted from IGE/Secondary:

   (1) Do you have an instructional program which has been planned for each student and contributes to attaining the school's objectives?

   Is there a basic skills program?

   Are there minimum competencies required for graduation?

   Is there objective based instruction?

   Are curricular materials developed to promote individualized instruction?

   What are the student evaluation procedures?

   Is there multiaged grouping?

   Is there flexible grouping and independent study?

   Are there community experiences programs?

   Are there vocational and other specialized learning programs to meet individual needs?

(2) Is there a teacher-advisor program?

Is there student participation in selection of courses?

(3) What are the administrative arrangements?

Is there an instructional improvement committee?

Are there schools within the school?

Are there alternative schools?

Is there team teaching?

(4) Is there a program of home-school-community relations?

(5) Is the school connected to leagues, networks or other support agencies?

(6) Are there any other features of the school which relate to individualized schooling?

H. Ask if the school would be willing to cooperate in the research studies which are proposed.

I. If the reply is favorable say that a letter will be sent, together with an abstract of the Center's proposed project. Mention that the final selection of schools will be made in the near future and that we will be in contact soon.

J. Thank the person for his time, interest, and cooperation.

APPENDIX B

ABSTRACT OF PROPOSED RESEARCH

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street Madison, Wisconsin 53706 (608) 263-4200

Dear

Thank you for your warm response to our telephone call in which we sought information regarding the program to individualize instruction at ________________High School--particularly the administrative and organizational arrangements you employ to facilitate individualized instruction.

As you requested, enclosed is a summary of the research programs planned by the Wisconsin Research and Development Center for the forthcoming year.

We would be pleased if you would send us any materials describing the curriculum and the administrative and organizational arrangements for your school so that we might familiarize ourselves with them.

The program and organization which we discussed on the telephone indicates that the school may be an appropriate one for further study. We have therefore included it on our list of schools and will be calling you shortly to discuss with you the possibility of our conducting research in your school.

Should you wish to contact us, please do so at 608-263-4266 or 4267.

Cordially yours,

John Daresh
Project Associate

Noel Watkins
Project Associate

Glenn Neiner
Project Associate

Enc.

SUMMARY OF PLANNED RESEARCH STUDIES ON THE ADMINISTRATION AND ORGANIZATION OF INSTRUCTION BY THE WISCONSIN RESEARCH AND DEVELOPMENT CENTER

The Administration and Organization for Instruction Unit of the Wisconsin Research and Development Center at the University of Wisconsin-Madison is currently engaged in a research and development project regarding individualized instruction in secondary schools.

Headed by Dr. James M. Lipham, the unit is engaged in three tasks:

1. Research on the decision-making processes which facilitate effective instructional programming for the individual student;
2. Development of prototypic organizational models for use by innovative schools;
3. Preparation of staff development materials which describe the alternative forms of administrative organization.

Initiative for the research studies began with a national conference conducted by the Center on individually guided secondary education in April, 1976. A similar invitational conference will be held in Spring, 1978, when administrators may meet with Center faculty and students conducting research and development activities in secondary education.

Two studies have investigated staff perceptions of the desirability and degree of implementation of IGE/Secondary objectives in their schools. Three studies are proposed for 1977-78. Each study will focus on an aspect of the organizational arrangements as they relate to the implementation of individualized instruction in the school.

The study by John Daresh will examine the impact that external and internal factors have upon the high school and the school's ability to maintain and strengthen its program of individualized instruction. The researcher will interview school personnel and others to determine (1) what there is about the internal operation of the school which tends to provide a facilitative environment for the individualized program, and (2) what factors in the immediate environment of the school seem to enhance or inhibit the school's program.

The study by Glenn Neiner will identify and describe the key factors which were operative in facilitating the change process in secondary schools. The study will seek to (1) identify and describe the strategies within the change process that occurred, and (2) discover the critical factors in the change process as well as the relationship between them.

The study by Noel Watkins will examine the decision-making process within the school. He will examine the domains of decisional autonomy accorded each of the sub groups--principals, subject departments, sub-schools, teaching teams, etc.--in the areas of curriculum, resource allocation, etc. The effectiveness of the decision-making process in facilitating the school's individualized instructional program also will be assessed.

Field methodology will be used in each of these descriptive studies. Data will be collected from analysis of available documents and from open and structured interviews held with principals, departmental chairpersons, heads of subschools or teams, counselors, and teachers. John Daresh also wishes to speak with principal(s) of other high schools in the district, central office personnel, the president of the school board, and presidents of the parents and the teachers' groups and associations.

The three companion studies will take place simultaneously in each school; each visit should take approximately four to five days.

The anonymity of all respondents will be strictly guarded and at no time will the identity of participating individuals, schools, or school districts be revealed. The results of these studies of six selected senior high schools across the nation will be published in the form of technical reports and will be distributed to each school involved in the studies.

APPENDIX C

INTERVIEW PROTOCOL

Pilot School

Interview Protocol

1. What were the concerns or issues that were being discussed in the school just prior to the change.

2. What was the organizational structure which existed in the school just before the change took place?

3. What was the source of information for the change?

4. How was the change initiated in your school?

5. Who were the key persons responsible for the change in terms of:

   a) an idea person(s)? b) the implementation person(s)?

6. Whom did the change focus upon?

   a) administrators? b) staff? c) kids?

7. What alternatives were considered before deciding upon this particular change program?

8. How was the decision reached to bring about the change in your school?

9. Could you describe the change that took place?

10. What strategies were used to bring about this change in your school?

11. Can you identify any specific plans which were used in order to adopt these ideas into the school?

    a. How were these plans developed?

12. What decision-making processes were used to bring about these plans for individualized education?

    a. group decision-making: who were involved?
    b. single decision-maker: who?

13. Can you identify any factors which you think helped to support the changeover to these new ideas?

14. Can you identify any factors which you think hindered the changeover?

15. How effective do you think the plans were for bringing about the desired changes?

16. What positive effects have resulted from the change?

17. Were there any negative effects?

18. How have the results of the change been evaluated?

19. How do you see the program now being handled in your school?

20. From your present perspective, what things, if any, do you think should be done differently?

    a. How would you now do them?

21. Whom would you recommend that I talk with in order to have a better understanding of the change process that took place in your school?

INTERVIEW PROTOCOL

1. Would you describe how the change was initiated in your school?
2. Who were the key persons responsible for the change?
3. What strategies were used to bring about this change in your school?
4. Can you identify any factors which you think helped to support the changeover to these new concepts?
5. Can you identify any factors which you think hindered the changeover process?
6. What positive effects have resulted from the change?
7. Were there any negative effects?
8. From your present perspective, what things, if any, do you think should have been done differently?
9. Are there any other aspects of change which I haven't touched upon in our discussion which you think are important and should be considered?
10. Whom would you recommend that I talk with in order to have a better understanding of the change process that took place?

INDIVIDUAL PROFILE

Name: ______________________________ Position: ________________

a. Sex: Male _____ Female _____

b. Teaching Experience: in this school _____ Total Yrs. _____
in the district ____

c. Involvement in education other than teaching: ______________
____

d. Race: White ____ Black ____ Spanish ____ Other ____

e. Highest Degree Attained: ___________________________

f. Working on a Degree: Yes _____ No _____

g. Teaching Area: ____

h. Have you taken courses during the past 3 years? Yes ___ No___

i. Positions held in addition to teaching:

1. Dept. Chairperson ____
2. Learning Community Leader ____
3. Unit Leader ____
4. Assistant Principal ____
5.
6.

j. Approximate Age: ____

k. Other Experiences: ____
____
____

APPENDIX D

INFORMED CONSENT FORM

Research Study

STUDIES OF ADMINISTRATION AND ORGANIZATION FOR INSTRUCTION: ORGANIZATION OF THE SCHOOL FOR INDIVIDUALIZED INSTRUCTION

Informed Consent Form

The research study in which you are participating is designed to examine functions, processes, and role relationships in schools that emphasize individualized instruction. The purpose of the study is to utilize organizational theory to refine and improve the structure of the school. In conducting the study, researchers will conduct individual (or group) interviews with administrators, department chairpersons, teachers, aides, and others regarding their actual (real) expectations and behaviors, as well as their idealized (desired) expectations and behaviors.

The anonymity of all participants is guaranteed and no individual, school, or school district will be identified in any reports of the research. It is expected that the results of this research will be of both theoretical and practical value to the field of education and to the public at large.

The University of Wisconsin-Madison has formally assured the United States Department of Health, Education, and Welfare (DHEW) that it will assure the protection of any human being exposed to risk in any project or program that DHEW or any of its agencies has been requested to support. A copy of this assurance will be made available to you upon request.

There are no known discomforts or risks associated with any of the procedures in which you will participate and such procedures are in conformity with accepted professional practice.

Any questions you may have concerning the procedures to be utilized in this study will be answered. You are free to withdraw your consent and to discontinue participation in this study at any time.

Please sign below to indicate your consent to participate in the study.

Subject ____________________ Date ____________

APPENDIX E

DESCRIPTIVE INFORMATION AND DAILY SCHEDULE

DESCRIPTIVE INFORMATION

I. District

a. Size:

1. Total number of students: Elementary: ____________________

Gr. - Middle: __________________

Sr. H. S.: ____________________

2. Types and number of each school in the district:

Elementary ______ Sr. H.S.______ Special Ed. ________ (grades __________)

Jr. H. S. ________ (grades ___ to ___) Voc. Ed.______ Alternatives _______ (grades __________)

3. How many elementary schools feed into the Sr. H.S.? ______

4. How many Jr. high schools feed in the Sr. H. S.? _________

b. Community:

1. Type of community: city (under 50,000) _____ suburban ____
city (50 - 200,000) _____ rural _______
small town _____ industrial _____ inner city _____

2. Community composition: low income _____ low-middle _____
middle income _____ climbing middle _____ high _____

3. Racial composition: White _____% Black _____%
Spanish _____% Native American _____% Other _____%

4. Community Support for Education: high _____ moderate _____
low _____ neutral _____
The support is: financial ____ involvement _____
words only _____

5. General Comments: ____

____

II. School ____
(Name)

a. Constructed in _________. Comments _______________________

b. Style of architecture: open-space concept _____
segregated areas _____ fixed classrooms _____

Comments: ____

c. General description of the school and its facilities: _________

____

____

d. Built to handle _______ students and now has _______ students.

e. Statistics: Grade 12 = _____ students Comments: ____________
11 = _____ ______________________
10 = _____ ______________________
9 = _____

Racial composition: White _____% Black _____%
Spanish _____% Other _____%

Predicted H. S. enrollment trend: up ____ down ___ stable ____

f. Staff: 1. full time ______ 3. specialists ______
2. part time ______ 4. others ___________

Racial: White ____% Black ____% Spanish ____% Other ____%

Administrators: Principal _____ Assistant Prin. _____
Other _____ Give title of others ____________________________

Teacher's day: from _____ A.M. until ______ P.M.

g. School Organization for Instruction:
1. Learning Communities ______ 2. Sub schools ______
3. Schools within School _____ 4. Dept. Structure ______
5. Advisory System _____ 6. Alternative Sch. _____

h. Functioning Committees within the School:

1. Curriculum Committee _____ 2. Learning Communities _____
3. Interdisciplinary units _____ 4. Faculty Advis. Council ___
5. Dept. by Discipline _____ 6.
7. 8.

i. Extra School Committees:

1. Parent Teacher's Assoc. _____ 2. Teacher's Union _____
3. Teacher's Association _____ 4. Community Advisory Council _____
5. School Board and Size _______
6.

j. General Comments ____

____

____

____

DAILY SCHEDULE

School: ____________________________________

Date: ____________________ Day: __________________

TIME	ACTIVITY - MORNING
1.	1. ____
2.	2. ____
3.	3. ____
4.	4. ____
5.	5. ____

Notes:

	AFTERNOON
1.	1. ____
2.	2. ____
3.	3. ____
4.	4. ____
5.	5. ____

Notes:

	EVENING
1.	1. ____
2.	2. ____
3.	3. ____

Notes:

APPENDIX F

FOLLOW-UP LETTER

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608) 263-4200

Dear

We would like to thank you for your very warm reception into your school. Your people did a superb job of making us feel at home and assisting us in accomplishing our objectives.

Please extend our sincere thanks to all the members of the administration and the staff who were exceedingly cooperative with us while we were there. We found the personnel in your school to be very warm and dedicated professional persons. It was a pleasure meeting and talking with them.

We were impressed with what we observed in your school. We found our visit to have been fruitful in terms of our project. Plans are presently being developed for the Secondary Schools Conference to be held here at the Center in March. We hope to see you at that time. You'll receive more specific information regarding the conference as soon as it becomes available.

We wish you the best in all your endeavors. If we can be of any assistance to you, please don't hesitate to contact us at the Center.

Sincerely,

Glenn Neiner
Project Associate

Noel Watkins
Project Associate

John Daresh
Project Associate

Center Planning and Policy Committee

Richard A. Rossmiller
Wayne Otto
Center Co-Directors

Dale D. Johnson
Area Chairperson
Studies in Reading, Language, and Communication

Marvin J. Fruth
Area Chairperson
Studies of Implementation of Individualized Schooling

Penelope L. Peterson
Area Chairperson
Studies of Instructional Programming for the Individual Student

James M. Lipham
Area Chairperson
Studies of Administration and Organization for Instruction

Thomas A. Romberg
Area Chairperson
Studies in Mathematics and Evaluation of Practices in Individualized Schooling

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Curriculum and Instruction

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Educational Psychology

Fred W. Danner
Assistant Professor
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William J. Davis
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Assistant Professor
Child and Family Studies

Lloyd E. Frohreich
Associate Professor
Educational Administration

Marvin J. Fruth
Professor
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John G. Harvey
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Mathematics
Curriculum and Instruction

C. Rayfield Haynes
Assistant Professor
Educational Psychology

Frank H. Hooper
Professor
Child and Family Studies

Dale D. Johnson
Professor
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Herbert J. Klausmeier
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Joel R. Levin
Professor
Educational Psychology

James M. Lipham
Professor
Educational Administration

Dominic W. Massaro
Professor
Psychology

Donald M. McIsaac
Professor
Educational Administration

Wayne Otto
Professor
Curriculum and Instruction

Penelope L. Peterson
Assistant Professor
Educational Psychology

Robert G. Petzold
Professor
Music
Curriculum and Instruction

Thomas S. Popkewitz
Associate Professor
Curriculum and Instruction

Gary G. Price
Assistant Professor
Curriculum and Instruction

W. Charles Read
Associate Professor
English and Linguistics

Thomas A. Romberg
Professor
Curriculum and Instruction

Richard A. Rossmiller
Professor
Educational Administration

Peter A. Schreiber
Associate Professor
English and Linguistics

B. Robert Tabachnick
Professor
Curriculum and Instruction

J. Fred Weaver
Professor
Curriculum and Instruction

Gary G. Wehlage
Associate Professor
Curriculum and Instruction

Steven R. Yussen
Associate Professor
Educational Psychology

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